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ABSTRACT

In late 1986, the United States Department of Education contracted with Pelavin Associates to conduct a study of the dropout problem in the United States. The research project was undertaken to provide a national overview of the dimensions of the dropout problem, focusing specifically on gender differences; and to identify successful or effective strategies for serving dropout-prone youth and school dropouts. The research was conducted in two phases. The first phase consisted of a research review conducted to assess the national dimensions of the dropout problem, identify successful strategies, and choose individual dropout programs for greater study through site visits. The second phase consisted of site visits to nine dropout prevention and recovery programs that appeared to be relatively effective in reducing the incidence of school dropouts. The findings are reported in three volumes. This document, volume I, presents a national overview of the dropout problem and differences in the dropout problem among young men and women. It discusses the magnitude of the dropout problem, the characteristics of male and female dropouts, the reasons different students drop out of school, and the consequences of dropping out for male and female youth. Eighteen tables, six figures, and a bibliography are included. (NB)

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DROPPING OUT OF SCHOOL

Volume I: Causes and Consequences For Male and Female Youth

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December 1987

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PREFACE

In late 1986, the U.S. Department of Education contracted with Pelavin Associates to conduct a study of the dropout problem in the United States. The study has two major purposes. One is to provide a national overview of the dimensions of the problem, focusing particularly on differences in the nature of the problem and the consequences of dropping out of school for male and female youth. The second, and more important, purpose is to identify "successful" or "effective" strategies for serving dropout-prone youth and school dropouts.

The research for this project was conducted in two phases. In the first phase of the research, we conducted a review of the literature on the dropout problem and on dropout prevention programs. We used the review to assess the national dimensions of the dropout problem, to identify the different strategies that are being used currently to address the dropout problem, and to develop a framework for selecting individual dropout programs for greater study through site visits. In the second phase of the research, we conducted site visits to a sample of nine dropout prevention and recovery programs that appear to be working relatively effectively in reducing the incidence of school dropouts.

The study's findings are reported in three volumes under the general title "Dropping Out of School." This Volume I, "Dropping Out of School: Causes and Consequences for Male and Female Youth," presents a national overview of the dropout problem and differences in the dropout problem among young men and women. The report discusses the magnitude of the

the dropout problem, the characteristics of male and female dropouts, the reasons different students drop out of school, and the consequences of dropping out for male and female youth.

In Volume II, "Promising Strategies and Practices in Dropout Prevention," we provide insights into ways practitioners and policy makers can work to effectively address the dropout problem. The volume presents the results of two research activities: a literature review that identifies the components and characteristics of "effective" programs; and site visits to nine dropout prevention and recovery programs that have demonstrated evidence of some success in addressing the dropout problem. We draw on these research activities to identify the most important components of dropout prevention programs and to suggest ways that services in these programs can be delivered most effectively.

Volume III, "Program Profiles," provides more detailed descriptions of the programs reviewed in the site visits. The descriptions include information about the programs' background, the targets of the interventions, program organization and structure, program staff and services, and the effects of the program on attendance, achievement, and retention in school.

Finally, an appendix to the report, "State Programs in Dropout Prevention," discusses state initiatives to address the dropout problem. The appendix presents an overview of programmatic strategies states are using to meet the needs of dropout-prone youth and school dropouts and strategies to finance these efforts. It concludes with a description of current and proposed programs in dropout prevention and recovery.

EXECUTIVE SUMMARY

The problem of school dropouts has become a critical concern to policymakers at the Federal, state and local levels in recent years. The problem appears particularly great for female students, many of whom drop out of school because of pregnancy or the need for child care. A majority of these girls who drop out never return to school and never obtain the skills required to enter the work force and contribute to their own financial support.

This study was undertaken by Pelavin Associates for the U.S. Department of Education to study the dropout problem. In this volume, we provide a national overview of the dimensions of the dropout problem, focusing specifically on differences in the problem between young men and women. The findings of the report focus on four major areas: the incidence of school dropouts among male and female youth; the characteristics of male and female dropouts; the reasons different students drop out of school; and the causes and consequences of dropping out for males and females. The major findings in each of these areas are presented below.

The Magnitude of the Dropout Problem

Estimates of the number of school dropouts and the dropout rate in different national surveys vary significantly. However, they all support the following conclusions about the dimensions of the country's dropout problem.

- **Between 600,000 and 700,000 youths and young adults between the ages of 14 and 24 drop out of school each year.** These include

325,000 to 375,000 males and 290,000 to 325,000 females. At the present time, there are are about 4.3 million people between the ages of 16 and 24 who are neither enrolled in high school nor have completed a high school diploma or its equivalent.

- **Males currently drop out of school at a higher rate than females. However, this appears to be a reversal of the pattern of earlier years.** Up through the late 1970s, the dropout rate for females exceeded the rate for males. A rise in the dropout rate for males up through the early 1980s, coupled with a steady decline in the dropout rate for females, has produced lower dropout rates for females.

- **Minorities drop out of school at higher rates than whites.** Since the mid-1970s, however, the dropout rate between blacks and whites has narrowed significantly. The rate for Hispanics, in contrast, has remained at consistently high levels. Hispanics currently drop out of school at more than twice the rate of whites.

- **The current dropout rate is estimated in most national surveys to be between 13 and 18 percent.** The "Wall Chart" published by the U.S. Department of Education estimates the dropout rate at about 29 percent, but this may be due, at least in part, to the method used to calculate the rate.

- **Overall, the number of dropouts has declined steadily since the early 1970s.** From 1974 to 1985, the number of high school dropouts age 14-to-24 declined by about 26 percent -- from about 930,000 to about 690,000.

- **Dropout rates have declined dramatically over the last decade.** Data from the Current Population Survey (CPS) indicate that dropout rates in the mid-1980s are only about 85 percent of the rates in the mid-1970s.

- Dropout rates are considerably higher than the national average in many of the nation's largest urban areas and in some rural regions of the country. **In some central city and rural school districts, dropout rates are between three and four times the national average rate.**

Although a sizable proportion of American youth permanently terminate their formal education before completing high school, many students who drop out of school eventually return to complete high school or obtain an alternative credential. The research suggests that:

- **Nearly 40 percent of school dropouts may return to school** and complete the requirements to graduate high school or obtain an

alternative certificate. Students who have completed more of their education before dropping out, i.e., juniors and seniors, are more likely to return to school than students who dropped out in earlier years.

- **Males are more likely than females to return to school and complete a high school diploma or an equivalent certificate.** Some evidence suggests that the return to school is primarily a phenomenon associated with white males, as this is the only group in the population which shows a consistent decline in the dropout rate with the aging of the population.

- **Many dropouts who complete their high school education do not return to a regular school program.** Many complete an alternative program or pass a General Equivalency Development (GED) test. The number of people taking the GED increased tenfold from 1961 to 1985.

Characteristics of School Dropouts and Returners

Research on school dropouts has begun to explore the relationships between student background characteristics, school experiences, and out-of-school behavior with dropout rates. It has also begun to differentiate male and female dropouts and the factors that may affect their respective decisions to leave school. The research finds that:

- **Dropouts come disproportionately from families that are low in socioeconomic status, single-parent, headed by females, and large in size. Parents and older siblings are also likely to be school dropouts.**

- **Completion of a high school education by both parents -- but especially the mother -- has a particularly strong relationship with dropout rates for females. Girls whose mothers are high school dropouts drop out of school at almost 2 1/2 times the rate of girls whose mothers have completed high school.** Mother's education has a particularly strong association with dropout rates for white females.

- Females drop out at lower rates than males where mothers only worked while the children were in elementary school or only in high school, but at about the same rate as males where mothers worked both in elementary and high school. Mother's employment may therefore have a less adverse effect on females' than males' decisions to leave school.

- **Dropouts have a school history that is marked by low academic achievement, low test scores, and retention in earlier grades.** They also are more likely to have a record of high absenteeism, truancy and disciplinary actions.

- **Females with the lowest academic ability drop out of school at a lower rate than males with the lowest ability academic ability.** However, females with the lowest academic ability drop out at nearly ten times the rate of females with the highest ability; for males, the ratio is only a little over seven to one.

- **Students who are married, have children, or both, drop out of school at much higher rates** than the rest of the student population. In the High School and Beyond surveys, females who were married or had children accounted for over 40 percent of the female dropouts.

- Students who work for pay drop out of school at slightly higher rates than those who do not work. However, the dropout rate for females increases with relatively fewer hours of employment, while for males it increases significantly only with longer hours of work.

- Students with the characteristics most strongly associated with dropping out are those least likely to return to school once they have dropped out. Individuals most likely to return to school are male, white, higher in academic ability, and from families of higher socioeconomic status.

Reasons Students Drop Out of School

Students drop out of school for a variety of reasons. These include problems with school, economic problems, and a variety of family-related concerns. While some of these reasons apply to both males and females, some reasons for dropping out apply more to one gender than the other. The research finds:

- Males are more likely than females to cite the inability to "get along with teachers" and discipline problems such as suspension or expulsion from school as a reason for dropping out of school.

- **Females report marriage or plans for marriage over four times as frequently as males as the reason for leaving high school. A large proportion of females also cite pregnancy** as a reason for discontinuing their high school education.

- **Economic factors motivate males' decisions to leave high school more than females'.** The opportunity to work is reported much more frequently by males than females as their reason for dropping out of school. Males also report the need to provide family support more frequently than females.

Consequences of Dropping Out of School

Dropping out of school has significant potential consequences for both the individual and society. Conversely, completion of high school is associated with personal and labor market benefits. Research also suggests that, in some areas, there are differential benefits for males and females. It finds:

- Completion of a high school education is associated with higher rates of employment for all segments of the population. In 1986, the employment rate for young adults age 18 to 24 who had completed four years of high school was about 44 percent higher than the employment rate of dropouts; for adults age 25 to 44, the employment rate for graduates was 36 percent higher than the rate for dropouts; for 45-to-64-year-olds, it was 28 percent higher.

- **While employment rates for males are consistently higher than rates for females -- both for dropouts and for high school graduates -- completion of high school reduces the gap in employment rates between males and females.** In March 1986, the employment rate of female dropouts age 18 to 24 was only 68 percent of the employment rate of male dropouts; for graduates, the female employment rate was 83 percent of the male rate. Among 25-to-44-year-olds, the employment rate of female dropouts was only 62 percent of the male rate, but the rate for female graduates was 76 percent of the male rate. For adults age 45 to 64, the female employment rate increased from 58 percent of the male rate for dropouts to 69 percent of the male rate for high school graduates.

- Although white females have an employment rate that is closer to that of white males, **completion of high school reduces the gap in employment rates between males and females more for minorities than for whites.** For black females age 18 to 24, the employment rate for dropouts was only 45 percent of the rate of black males, while for high school graduates, it was 72 percent of the male rate. Similarly for Hispanics, the female rate of employment increased from 50 percent of the male rate for dropouts to 78 percent for graduates.

- **Completion of high school is associated with a shift in employment** from the lowest-paying positions as operators, laborers and service workers to higher-paying positions, mostly in sales, precision production, technical fields, and administrative support. **Males, however, tend to move more into higher-paying technical and sales positions, while females move more into lower-paying administrative support positions.** Thus, while high school completion works to the advantage of both males and females in the types of employment available to them, males appear to benefit more than females in the types of jobs that a high school diploma opens up to them.

- **High school graduates earn more money than high school dropouts over the course of a lifetime.** Estimates of the difference in lifetime earnings for males ranges from $260,000 to $585,000 and for females from $170,000 to about $300,000.

- **Although completion of high school improves the earnings of both males and females, it improves the earnings of females relative to males most among whites in the younger age group.** For young minorities and for older age groups in the civilian labor force, completion of a high school education does not appear to reduce the earnings gap between males and females.

- High school dropouts produce a range of negative consequences for society. It was estimated in 1972 that high school dropouts cost the nation annually about $77 billion: $71 billion in lost tax revenue, $3 billion in welfare and unemployment costs, and $3 billion in crime prevention costs. A more recent estimate suggests a loss of about $68 billion in tax revenues to all levels of government from the high school class of 1981 alone.

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Joel D. Sherman

I. INTRODUCTION

The problem of school dropouts has become a critical concern to policymakers in recent years at the Federal, state and local levels. It is currently estimated that between 600,000 and 700,000 students drop out of school each year. The problem is particularly great for female students, many of whom drop out of school because of pregnancy or the need for child care. A majority of these girls who drop out never return to school and never receive a high school diploma. Consequently, they may never obtain the skills required to enter the work force and contribute to their own financial support.

Although school systems have in the past supported programs to prevent dropouts and bring dropouts back to school, many have recently developed new initiatives to address the problem of at-risk youths. In addition, the Federal Government, the states, and private businesses have launched new initiatives to help school systems deal with the dropout problem. Some of these programs have been designed to address the problem of dropouts in general; others have focused more on specific at-risk populations such as minorities and females.

In the fall of 1986, the U.S. Department of Education contracted with Pelavin Associates to conduct a study of the dropout problem. This study was designed to provide a national overview of the dropout issue and to identify effective strategies of dropout prevention and recovery. In both of these areas, there was a special focus on the problems of female dropouts. The national overview was designed to identify differences in the scope of the dropout problem among males and females, differences in

the characteristics of male and female dropouts and differences in the consequences of dropping out for male and female students. The program overview was designed to identify effective strategies of dropout prevention and recovery for all youth, but its particular focus was on the unique approaches that are being used to address the problems of female dropouts.

The results of this study will be presented in a series of reports. In this first report, we provide a national overview of the dropout issue, focusing specifically on the dimensions of the problem and differences in the problem for males and females. In subsequent reports, we describe promising strategies for serving at-risk youth, concentrating again, where appropriate, on strategies and practices that appear to be particularly successful with female students and dropouts.

II. THE MAGNITUDE OF THE DROPOUT PROBLEM

Defining the Dropout Problem

In recent months, the public has been bombarded with information about the growing problem of school dropouts. Research studies and media reports have cited dropout rates of 40 to 50 percent in some of the nation's largest cities (Chicago Panel on School Finances, 1985; Intercultural Development Research Association [IDRA, 1986]) and, in some cities, even higher rates for low-income and minority youths (Chicago Panel on School Finances, 1985; Hammack, 1986). However, despite this attention to the problem, there is relatively little agreement about the incidence of high school dropouts (Rumberger, 1986).

Several factors account for differences in estimates of the scope of the dropout problem. First, at the national level, there are a number of regular and special surveys that provide information about school dropouts, but these data collections conceptualize the term "dropout" in different ways. One concept is that dropping out is a discrete action that occurs at a particular point in time. An individual who leaves school without graduating or who has stayed away from school for some specified period of time is counted as a dropout, regardless of whether she or he later returns to school or completes a high school equivalency program. This approach is used by the Bureau of the Census in the Current Population Survey (CPS) to estimate annually the number of 14-to-24-year-olds who drop out of school between October of the previous school year and the current school year. It is also used by the U.S. Department of Education in the Wall Chart, "State Education Statistics,"

to create a dropout rate. Under the approach used by the Department, the number of entering freshmen in a given year is subtracted from the number of high school graduates four years later and divided by the number of entering freshmen to establish a dropout rate.

A second concept of a dropout is that dropping out is a condition. An individual is a dropout if, at a particular time, she or he is not enrolled in school and has not yet completed a high school equivalency diploma. Based on this definition, an individual could be a dropout at one point in time but would no longer be a dropout if she or he returns to school or completes a high school equivalency certificate. This approach is reflected in other CPS data from the Census that estimate on an annual basis the number and proportion of people in different age cohorts who are not enrolled in school and who have not completed high school. Data are reported for the overall population of youths and adults up to 34 years old, as well as for males and females and persons of different racial and ethnic backgrounds. The concept is also reflected in the Federal Government's High School and Beyond (HS&B) surveys which define a dropout as an individual who was a high school sophomore at the time of the first surveys but who was neither enrolled in high school nor a high school graduate at the time of the follow-up surveys.

Differences in the way the term dropout is conceptualized will produce differences in estimates of the number of dropouts and in dropout rates. As we indicate in the next section, statistics that reflect the concept of dropout as an action will tend to report higher dropout rates, particularly when a rate is calculated for a cohort of students rather than as an annual rate. On the other hand, statistics that reflect the

second concept, i.e., dropping out as a condition, tend to indicate lower dropout rates, since many people who are dropouts at one time eventually return to school and complete a high school education or an equivalent certificate.

In addition to the national estimates of school dropouts, many states and local education agencies (LEAs) compute dropout statistics. However, one problem here is the lack of a standard definition of a school dropout (Pallas, 1986; Rumberger, 1986). Definitions of dropouts in fact vary significantly from district to district and from state to state (Hammack, 1986; Cipollone, 1986; Council of Chief State School Officers (CCSSO, 1986). District definitions differ in several areas:

- Types of students who are counted as dropouts; (Some districts and states count students in special education programs, juvenile and mental institutions; others do not.)
- Age of students categorized as dropouts; (Some states and districts count all students; others count only students above or below the compulsory attendance age.)
- Period of absence from school before a student is considered a dropout; and
- Status of students after withdrawal from school. (Some districts and states consider enrollment in a General Educational Development (GED) program as a legitimate continuation of a student's education; others count GED students as dropouts.)

Although efforts are currently under way to standardize the definition of a dropout,[1] we are still a long way from a uniform national definition.

Finally, a third factor contributing to the lack of consensus about the magnitude of the dropout problem are differences in the method of

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[1] The Education Data Improvement Project of the Council of Chief State School Officers is currently working with the states to standardize the definition of dropouts.

calculating dropout rates (Cipollone, 1986; Stephenson, 1985; Morrow, 1986). Some districts compute annual dropout rates: the number of dropouts in a particular grade span is divided by a baseline population. Other districts calculate a cohort dropout rate: an entering class of high school freshmen is monitored over four years to establish the number of students from the class who drop out each year. The number of dropouts is divided by the number of entering freshmen to establish a cohort dropout ratio. Although each method has distinct advantages and disadvantages, they produce dropout rates that cannot be compared across school districts and states.

In summary, the number of school dropouts and dropout rates differ for a number of reasons. At the national level, different surveys use different concepts of a dropout and consequently produce different estimates of the dropout rate. At the state and local levels, differences in definitions and methods of counting dropouts make it difficult to compare dropout rates from place to place. These data collections are nonetheless useful, because they provide parameters for what is likely to be the best estimate of the dropout rate and some basis for assessing the relative incidence of dropouts among different social groups.

The Incidence of School Dropouts

This section presents estimates of national dropout rates from a number of sources. These include: 1) the Current Population Survey (CPS) from the Bureau of the Census; 2) High School and Beyond (HS&B), a set of surveys supported by the U.S. Department of Education on youths' high

school and post-high school experiences; 3) the National Longitudinal Surveys of Youth Labor Market Experience (NLS-Labor), supported by the U.S. Department of Labor; and 4) "State Education Statistics," more commonly known as the Wall Chart, published annually since 1984 by the U.S. Department of Education. In the first part of this section, we briefly compare the dropout rates estimated by these different national data collections. Later in the section, we provide more detailed information from some of these surveys. Where possible, we provide data on trends in dropout rates and describe differences in dropout rates between males and females and among racial and ethnic groups. We conclude the section with a review of selected studies that estimate the incidence of dropouts in different regions of the country and in different types of school districts.

Overview of Dropout Rates

The major national surveys of school dropouts estimate the dropout rate at different points during the late 1970s and the early 1980s. The CPS from the Bureau of the Census provides annual estimates up through 1985; HS&B estimates a dropout rate for students who were sophomores in high school in 1980; NLS-Labor estimates dropout rates for young adults between 1979 and 1982; State Education Statistics estimates dropout rates for the cohort of high school students who were freshmen in the fall of 1981. With the exception of State Education Statistics, the other three surveys appear to provide fairly consistent data about the nation's dropout rate. (See Table 1.) They find:

- **The national dropout rate during the early 1980's was between 14 and 15 percent.** The range was from a low of 13.6 percent of 1980 high school sophomores in public and private schools in

TABLE 1

Estimates of National Dropout Rates

	Current Population Survey (Bureau of the Census)	High School and Beyond (U.S. Department of Education)	National Longitudinal Surveys of Youth Labor Market Experience U.S. Department of Labor)	State Education Statistics (U.S. Department of Education)
Period	October 1981	1980 to 1982	1979 to 1982	1981 to 1985
Age Group	16-to-24-year-olds	1980 High School Sophomores	17-to-25-year-olds	High School Students, Grades 9-12
Population Group				
Males	15.1	14.6	15.8	--
Females	12.8	12.6	13.7	--
Whites	13.2	12.2	12.9	--
Blacks	18.5	16.8	19.4	--
Hispanics	33.2	18.7	32.4	--
Total	13.9%	13.6%	14.8%	29.4%

Sources: U.S. Department of Commerce, Bureau of the Census. Current Population Reports, Population Characteristics, "School Enrollment -- Social and Economic Characteristics of Students: October 1981," Series P-20, No. 373, February 1983; High School and Beyond, Center for Education Statistics, U.S. Department of Education; Paula Baker et al., "Pathways to the Future, Vol. IV, A Report on the National Longitudinal Surveys of Youth Labor Market Experience in 1982," Revised: April 1984, Center for Human Resource Research, The Ohio State University; U.S. Department of Education, "State Education Statistics," February 1987.

High School and Beyond to 14.8 percent of 17-to-25-year-olds in NLS-Labor.[2] CPS provided middle-range estimates, finding that 13.9 percent of 16-to-24-year-olds were neither a high school graduate nor enrolled in high school in October 1981.

- **Males drop out of school at higher rates than females.** The range in dropout rates for males was from 14.6 percent in HS&B to 15.8 percent in NLS-Labor; the rates for females ranged from from 12.6 percent in HS&B to 13.7 percent in NLS-Labor. Based on NLS-Labor data, male dropout rates were 15 percent higher than female rates; based on CPS data, they were about 18 percent higher.

- Blacks drop out at higher rates than whites, but dropout rates for Hispanics are well above the rates for both blacks and whites. Dropout rates for whites ranged from 12.2 percent in HS&B to 13.2 percent in the CPS; rates for blacks ranged from 16.8 percent in HS&B to 19.4 percent in NLS-Labor. Rates for Hispanics were higher than for the other two groups in all three surveys, but HS&B estimated much lower dropout rates for Hispanics than either CPS or NLS-Labor. The CPS and NLS-Labor both estimated dropout rates for Hispanics above 30 percent, while HS&B estimated the dropout rate for Hispanics at only 18.7 percent. The discrepancy between HS&B and the other two surveys may be based, in part, on the fact that Hispanics may drop out of school before their sophomore year of high school at a disproportionately high rate. HS&B may therefore significantly undercount the Hispanic dropout rate.

CPS Estimates of Dropout Rates

The most recent estimate of school dropouts from the Current Population Survey was that 612,000 youth between the ages of 16 and 24 dropped out of school between October 1984 and October 1985: these included 321,000 males and 291,000 females. Whites comprised about 75 percent of the dropouts; blacks, 22 percent; and Hispanics, 17 percent.[3] An additional 80,000 youth 14 and 15 years of age dropped out

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2 HS&B does not include individuals who dropped out of school before their sophomore year. It may therefore provide an underestimate of the dropout rate, since some students drop out of school before their sophomore year of high school.

3 Percentages do not add to 100 since Hispanics are included in both the white and black population groups.

of school during this period, bringing the total number of high school dropouts to just under 700,000 youth and young adults. Using the population of 14-to-19-year-olds enrolled in schools below the college level in October 1984 as the base for calculating a dropout rate, this number represents an annual dropout rate of 4.8 percent[4] for the 1984-85 school year and a cohort dropout rate of 17.4 percent for 14-to-19-year-olds who were in school in October 1981.[5]

Over the last 15 years, annual dropout rates have fluctuated within a relatively narrow range. After rising to 5.9 percent during the 1973-74 school year, the dropout rate declined to a low of 4.4 percent in 1982-83. Although the annual dropout rate rose again to 4.8 percent in 1984-85, rates for the first years of the 1980s have been consistently lower than rates in the 1970s. (See Figures 1 and 2.) Cohort rates parallel the trends for single years. The cohort rate peaked at 20.4

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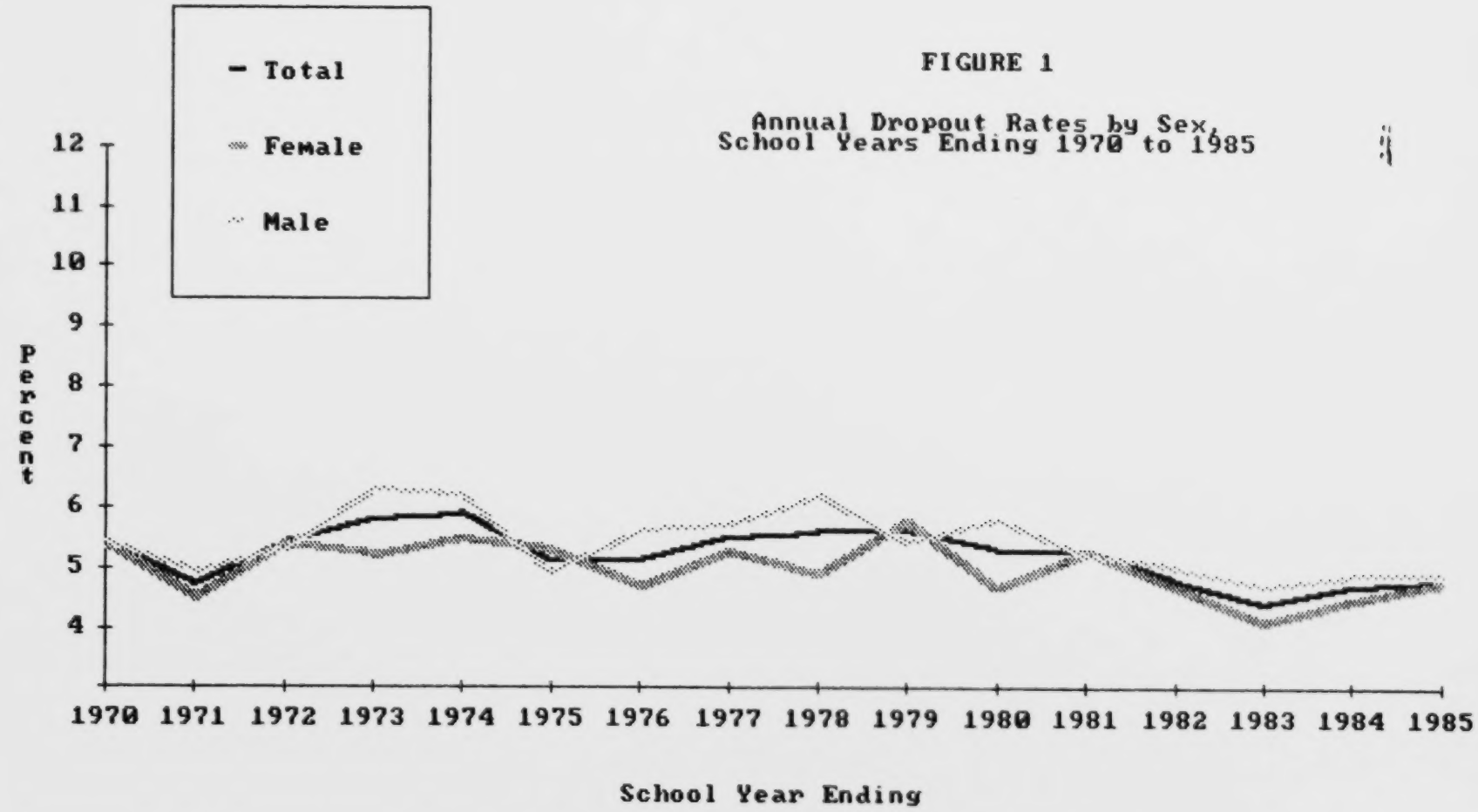
4 This method of calculation overestimates the dropout rate for two reasons: (1) it counts as dropouts individuals who leave school but who subsequently return to school and complete a high school degree or its equivalent; and (2) it includes post-high-school-age youth among the dropout population. We cannot estimate the effect of the first factor on the dropout rate but the effects of including the second may be significant. Unpublished data indicate that 97,000 of the 692,000 persons who dropped out of school between October 1984 and October 1985 were 20-to-24-year-olds. Excluding them from the dropout population would produce a dropout rate of 4.1 percent for the 1984-85 school year and a cohort dropout rate of 15.1 percent, if we assume that the proportion of dropouts who were 20-to-24-years-old was the same in the three previous years.

5 In calculating a cohort rate, we assumed that the annual dropout rate in each high school grade was the same as the overall annual dropout rate. A high school dropout rate was calculated by reducing the enrollment of 14-to-19-year-olds in October 1981 by the proportion of dropouts in 1981-82, 1982-83, 1983-84, and 1984-85 and dividing the residual enrollment count by the original 1981 enrollment.

FIGURE 1

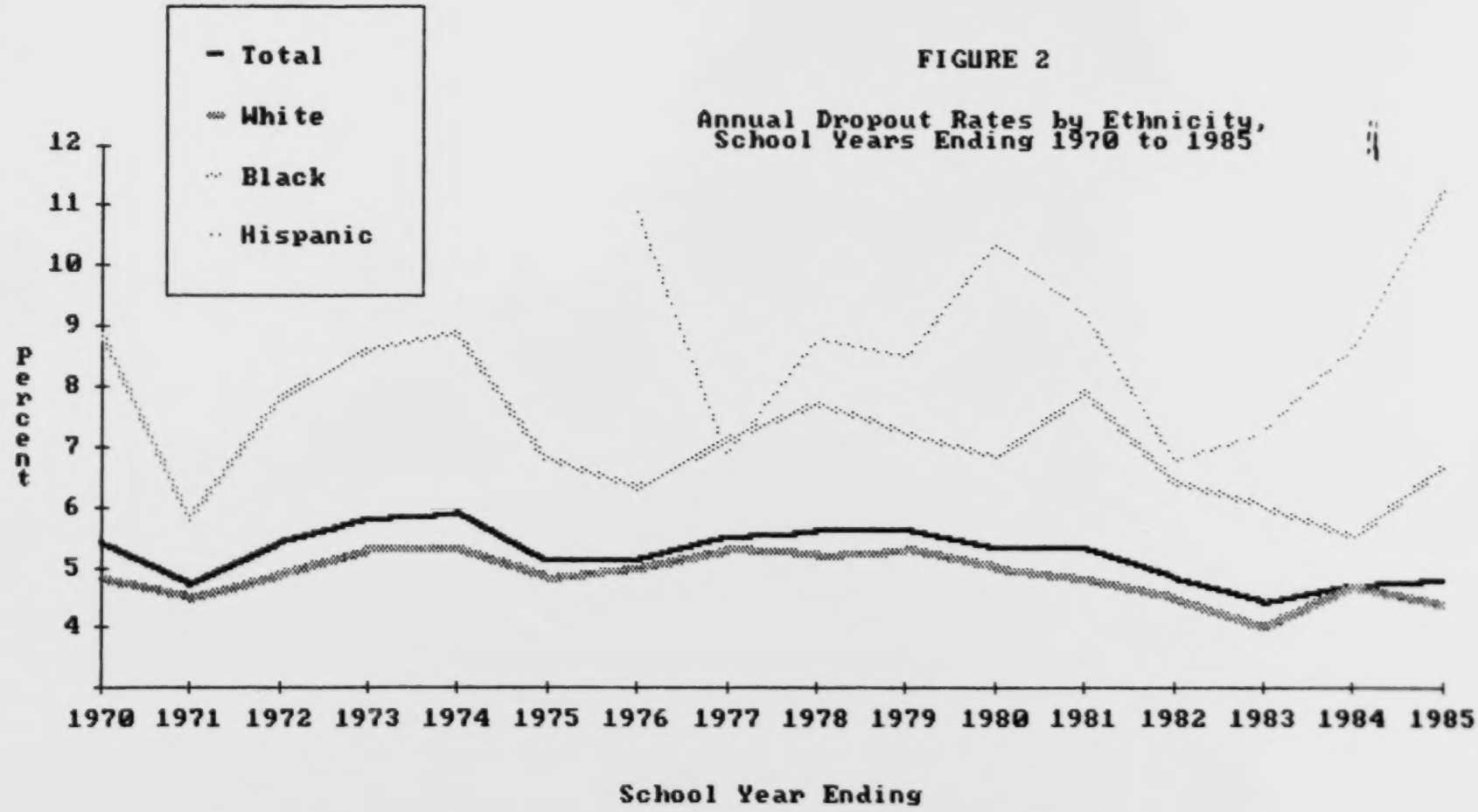
Annual Dropout Rates by Sex,
School Years Ending 1970 to 1985



Sources: U.S. Department of Labor, Bureau of Labor Statistics, 1984–1986.

FIGURE 2

Annual Dropout Rates by Ethnicity,
School Years Ending 1970 to 1985



Sources: U.S. Department of Labor, Bureau of Labor Statistics, 1984–1986.

percent in 1971-72 and has declined steadily since the mid-1970s. In 1981-82, the cohort rate of 17.4 percent was only about 85 percent of the peak rate a decade earlier. (See Figures 3 and 4.)

Annual dropout rates have, in most years, been higher for males than for females, while cohort rates have consistently been higher for males than for females throughout the 1970s and early 1980s.[6] For males, the annual dropout rate peaked at 6.3 percent in 1972-73 and dropped to a low of 4.7 percent in 1982-83; the cohort rate dropped from a high of 20.8 percent in the early 1970s to a low of 18.1 percent in 1981-82. For females, the annual dropout rate peaked at 5.8 percent in 1978-79 and dropped to a low of 4.1 percent in 1982-83; the cohort rate reached a high of 19.7 percent in 1971-72 and dropped to a low of 16.9 percent in 1981-82. As with the overall population, dropout rates for both males and females have consistently been lower in the 1980s than in the previous decade.

Dropout rates for minorities are considerably higher than dropout rates for whites.[7] In 1984-85, the annual dropout rate for blacks was over 50 percent higher than the rate for whites and the rate for Hispanics was 2 1/2 times the white dropout rate. Similarly, the cohort dropout rate for the 1981-82 cohort of 14-to-19-year-olds was 37 percent higher

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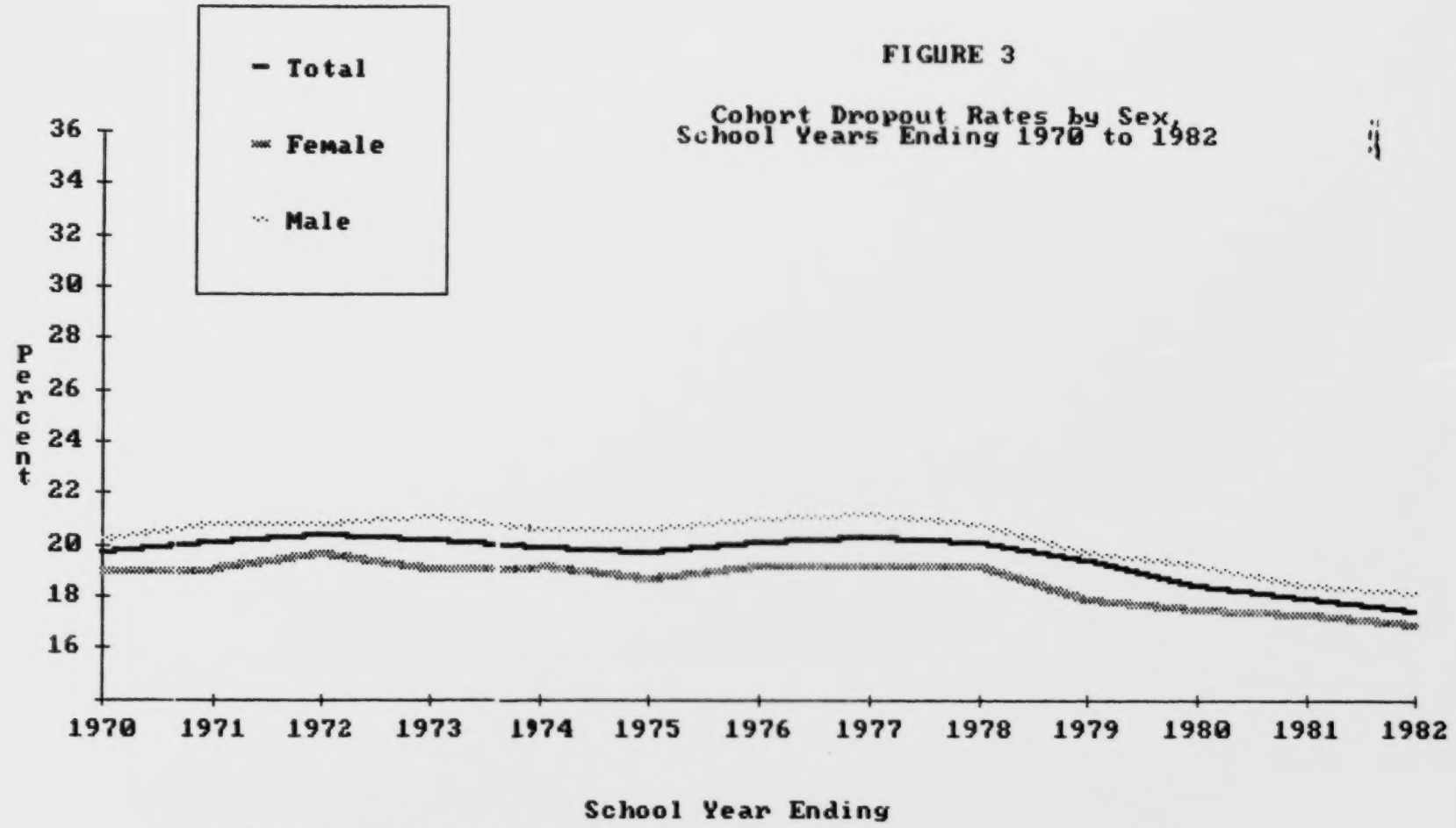
6 In the CPS, dropout numbers for males and females are provided for the 16-to-24-year-old population. In calculating dropout rates for males and females, it was assumed that the proportion of male and female dropouts who were 14 to 15 years old was the same as for the 16-to-24 age group.

7 The same procedure used to calculate dropout rates for males and females was used to calculate dropout rates for different racial and ethnic groups.

FIGURE 3

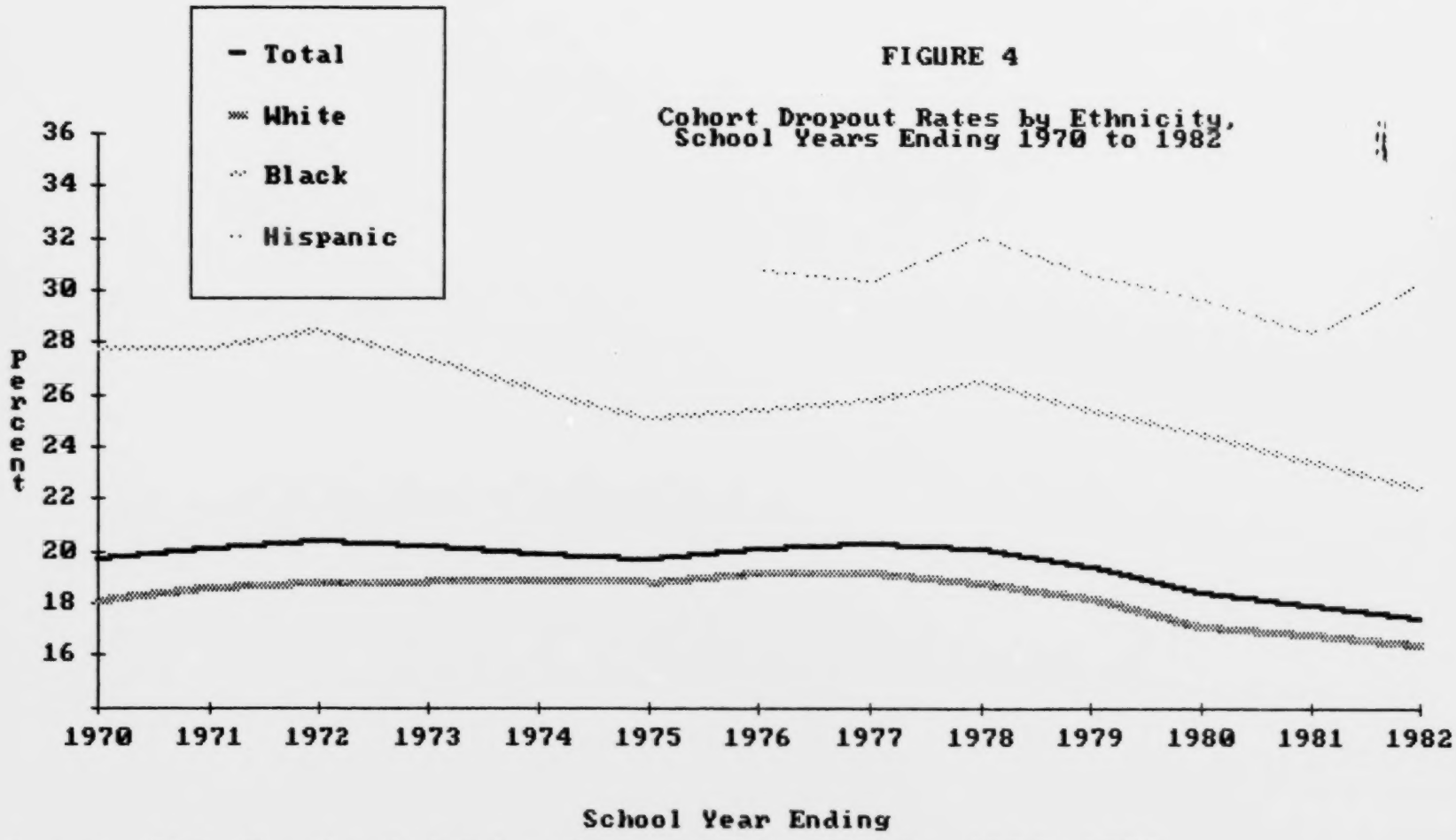
Cohort Dropout Rates by Sex,
School Years Ending 1970 to 1982



Sources: U.S. Department of Labor, Bureau of Labor Statistics, 1984–1986.

FIGURE 4

Cohort Dropout Rates by Ethnicity,
School Years Ending 1970 to 1982



Sources: U.S. Department of Labor, Bureau of Labor Statistics, 1984–1986.

for blacks than whites and almost two times the white rate for Hispanics. Since the mid-1970s, dropout rates for both whites and blacks have declined dramatically -- for whites, cohort rates declined from a high of 19.2 percent in 1976-77 to a low of 16.4 percent in 1981-82; for blacks, from 28.4 percent in 1971-72 to 22.4 percent in 1981-82. Dropout rates for Hispanics, in contrast, have remained at consistently high levels. The cohort dropout rate for Hispanics has, in all recent years, been around 30 percent of the 14-to-19-year-old age group.

CPS Estimates of Youth Not Enrolled in School Who Have Not Completed High School

Data from the CPS provide another perspective on the incidence of school dropouts, namely the number of people in the youth cohort who are not high school graduates and who have not completed high school. Except for a few small points, these data generally support the findings about the incidence of school dropouts presented above.

In October, 1985, over 4.3 million young adults age 16 to 24 who were not high school graduates were not enrolled in school. These included nearly 2.3 million males and almost 2.1 million females. Whites numbered almost 3.5 million, blacks about 725,000, and Hispanics about 800,000.[8] The 4.3 million people represented 12.6 percent of all 16-to-24-year-olds.

During the last decade and a half, the proportion of youth age 16 to 24 who are not high school graduates and who are not in school has declined consistently. (See Figure 5.) The "dropout" rate in 1985 (12.6

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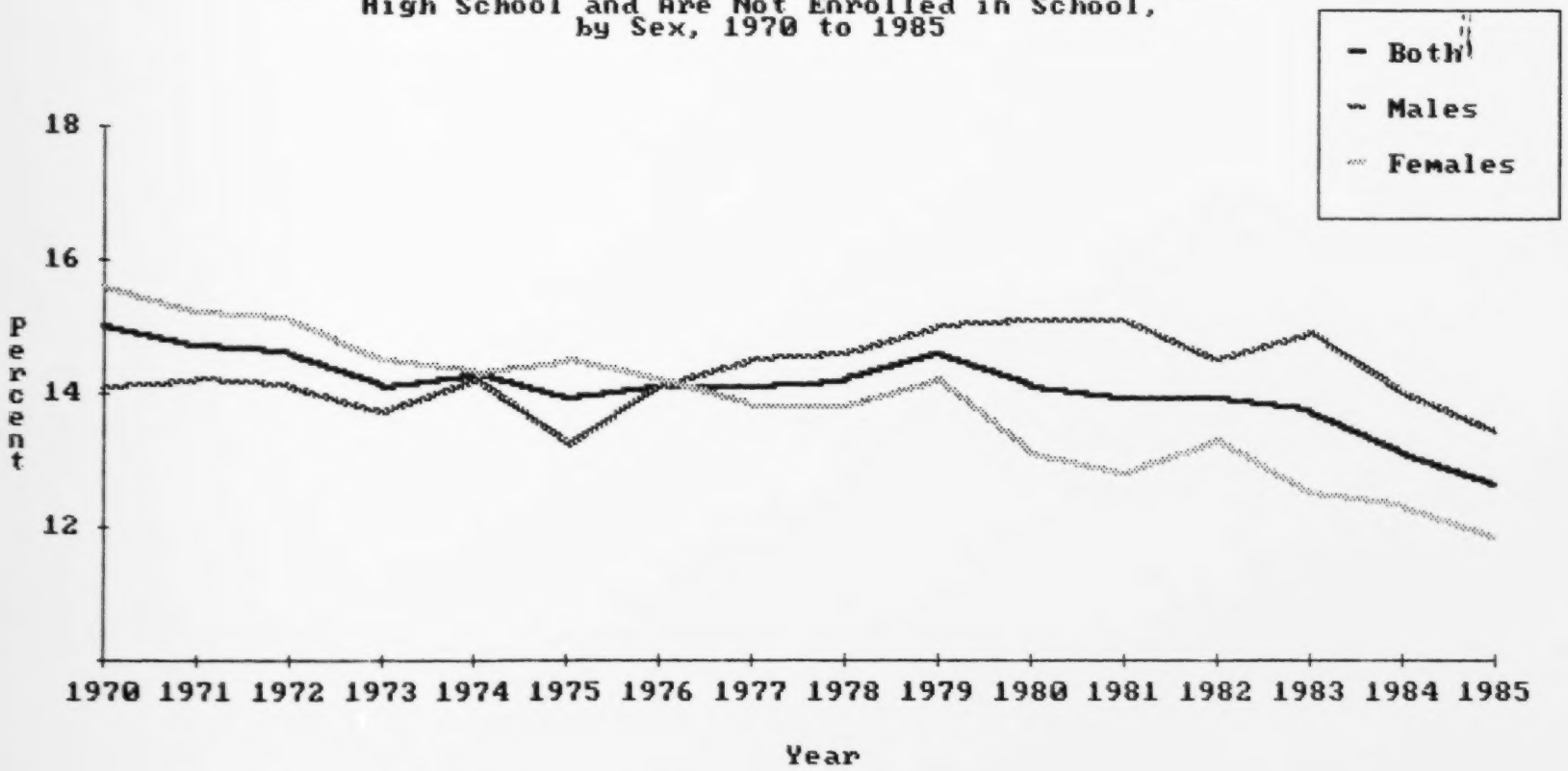
[8] The sum of dropouts for racial and ethnic groups do not equal the total since Hispanics are included in both the white and black population groups.

FIGURE 5

Percent of 16 to 24 Year-Olds Who Have Not Completed High School and Are Not Enrolled in School, by Sex, 1970 to 1985



Source: U.S. Department of Commerce, Bureau of the Census, Series P-20.

percent) was only about 84 percent of the rate in 1970 (15.0 percent). Since 1979, the proportion of young adults who are not high school graduates and who are not enrolled in school has declined every year.

Dropout rates for females are currently lower than dropout rates for males. In 1985, the dropout rate for females was about 88 percent of the rate for males (11.8 percent compared to 13.4 percent). However, this has not been the case for very long. Through the mid-1970s, the dropout rates for females exceeded the rates for males; beginning in 1977, the pattern was reversed. The basis for this change lies in differences in the patterns of school non-completion for males and females. Since 1970, the proportion of female dropouts declined steadily -- from 15.6 percent in 1970 to 11.8 percent in 1985. The dropout rate for males, in contrast, rose during the 1970s, peaking at 15.1 percent in 1980 and 1981 before declining to current levels.

Dropout rates for all three major racial and ethnic groups are consistent in most ways with the patterns for the overall 16-to-24-year-old population. In recent years, dropout rates for females have been lower than dropout rates for males and, except for white males, dropout rates have declined significantly from 1970 to 1985. The decline in dropout rates was most extreme for blacks of both sexes, followed by Hispanic and white females. For black males, the dropout rate in 1985 (16.1 percent) was only 55 percent of the rate in 1970 (29.4 percent); for females the 1985 rates for blacks, Hispanics, and whites were 53 percent, 72 percent, and 80 percent, respectively, of the 1970 rates. (See Table 2.)

TABLE 2

Percent of 16-to-24-Year-Olds Who Have Not Completed High School and Are Not Enrolled in School, by Sex and Racial and Ethnic Group, 1970 to 1985

October of School Year	Whites		Blacks		Hispanics	
	Males	Females	Males	Females	Males	Females
1970	12.2%	14.1%	29.4%	26.6%	--	--
1971	12.6	14.2	25.5	22.1	--	--
1972	13.0	14.2	22.3	20.8	33.6%	35.0%
1973	12.5	13.3	21.6	22.9	30.7	36.4
1974	13.4	13.1	20.1	22.3	33.8	32.3
1975	12.0	13.2	22.8	22.8	26.6	31.5
1976	13.2	13.3	21.2	19.7	30.2	32.3
1977	13.9	12.8	19.4	20.0	31.5	34.2
1978	13.6	13.1	22.5	18.2	33.6	33.0
1979	14.0	13.1	22.5	20.0	33.0	34.5
1980	14.2	12.3	21.1	17.9	37.2	33.2
1981	14.5	11.9	20.0	17.2	35.9	30.3
1982	13.6	12.7	21.1	16.0	30.6	32.7
1983	14.0	11.7	19.8	16.5	34.2	29.0
1984	13.5	11.8	16.7	14.5	30.6	29.1
1985	13.0	11.3	16.1	14.2	29.8	25.2

Source: U.S. Department of Commerce, Bureau of the Census, Population Characteristics, School Enrollment: October 1970; Social and Economic Characteristics of Students: October 1971 to October 1985, Series P-20, 1971 to 1986.

Over the course of the 1970s and early 1980s, the difference in dropout rates between blacks and whites narrowed significantly. Whereas in 1970, the dropout rate for black males was over 2.4 times the rate for white males (29.4 percent compared with 12.2 percent), in 1985 the rate for black males was only 24 percent higher than the rate for white males. Similarly, for females, the ratio of black/white dropout rates declined from 1.89 in 1970 to 1.26 in 1985. In contrast, dropout rates for Hispanics did not improve very much relative to whites over this period. For Hispanic males and females, the dropout rate in 1970 was about 2.5 times the white rate; in 1985, it was still about 2.25 times the white rate.

Dropout Estimates from Other Major Surveys

Two national surveys cited previously provide additional estimates of the country's dropout rate: High School and Beyond (HS&B), and the National Longitudinal Surveys of Youth Labor Market Experience (NLS-Labor).

High School and Beyond, which is a longitudinal survey of a randomly selected sample of 30,000 sophomores from over 1,000 public and private high schools in 1980, provides data on dropout rates that parallel the findings of the Current Population Survey. Overall HS&B finds the dropout rate for all categories of students to be 13.6 percent[9] (Kolstad and

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9 According to the specifications for the HS&B surveys, a dropout is a person who was a high school sophomore in spring 1980 but who was neither enrolled in high school nor a high school graduate or the equivalent at the time of the follow-up survey in spring 1982. As stated previously, the HS&B data do not count as dropouts individuals who leave school before their sophomore year. They may therefore underestimate the number of dropouts, since some students drop out in lower grades.

Owings, 1986; Barro, 1984). Males drop out at a higher rate than females (14.6 percent compared to 12.6 percent), while all minorities except Asians have higher dropout rates than whites. The dropout rate for blacks is about 24 percent higher than the rate for whites (16.8 percent compared to 13.6 percent), while the rate for Hispanics is about 38 percent higher (18.7 percent compared to 13.6 percent). American Indians have the highest dropout rate at 22.7 percent, Asians the lowest at 4.8 percent. (See Figure 6.)

Although the dropout rate for males exceeds the female rate in all racial/ethnic groups, the size of the difference varies among groups (Barro, 1984). The male dropout rate exceeds the female rate for whites by 13 percent, for blacks by 46 percent, and by less than one percent for Hispanics.[10] The difference in dropout rates for minority groups relative to whites is also different for males and females. Black males drop out at a rate that is 55 percent higher than white males, Hispanic males at a rate that is 45 percent higher. For females, the differences between blacks and whites is 20 percent, between Hispanics and whites, 62 percent.[11]

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10 Although the HS&B findings correspond with CPS's overall estimates of dropout rates, they differ in their estimates of the relative dropout rates of males and females in different ethnic groups. The CPS data for 1985 indicate that the difference in dropout rates between males and females is lowest for blacks (13 percent), in the middle for whites (15 percent), and highest for Hispanics (18 percent).

11 Estimates of the relative difference in dropout rates among racial groups differ between HS&B and CPS. The CPS estimates a much higher difference in dropout rates between Hispanics and whites of both sexes and higher differences in dropout rates between black and white females.

FIGURE 6

Percent of 1980 High School Sophomores Who Dropped Out Before Graduation, by Sex and Ethnicity.

Source: NSB, Center for Education Statistics, U.S. Department of Education.

The National Longitudinal Survey of Youth Labor Market Experiences supported by the Department of Labor is a longitudinal study of over 12,000 randomly selected young men and women who were 14 to 21 years old when first interviewed in 1979. This survey shows that among 17-to-25-year-olds during the 1979-82 period, about 13 percent of whites, 19 percent of blacks, and 32 percent of Hispanics failed to complete high school or obtain a GED certificate. (See Table 3.) Dropout rates for both males and females peaked in the late teens (19.0 percent for 19-year-old males and 15.6 percent for 18-year-old females) but then declined as youth entered their twenties. On the other hand, dropout rates for minority youth declined much less rapidly with age than rates for whites. Dropout rates for whites declined by about 28 percent from age 19 to age 22, while dropout rates for blacks declined by only about 13 percent, and rates for Hispanics dropped by less than seven percent. These results provide some evidence that minority youth may be much less likely than whites to return to school once they have dropped out.

Dropout Estimates by the U.S. Department of Education

The Center for Education Statistics in the U.S. Department of Education administers, as part of the Common Core of Data, a universe survey of state education agencies that collects data on the number of high school graduates from regular day programs in public schools. As indicated previously, a graduation rate is frequently computed from this data by dividing the number of current-year graduates by the number of students enrolled in ninth grade three years earlier. The dropout rate is determined to be the inverse of the graduation rate.

TABLE 3

Age-Specific Dropout Rates by Sex and Ethnicity, Averaged Over 1979-1982

Population Group	17	18	19	20	21	22	17-to-25
Males	11.9%	16.8%	19.0%	16.6%	15.9%	14.8%	15.8%
Females	12.0	15.6	15.3	14.1	13.6	11.5	13.7
Whites	11.4	15.0	15.1	12.8	12.1	10.9	12.9
Blacks	11.4	17.4	22.3	22.7	22.5	19.7	19.4
Hispanics	21.1	31.0	35.6	36.6	36.0	34.1	32.4
All Groups	12.0	16.2	17.1	15.4	14.8	13.2	14.8

Source: Paula Baker et al., "Pathways to the Future, Vol. IV, A Report on the National Longitudinal Surveys of Youth Labor Market Experience in 1982," Revised: April 1984, Center for Human Resource Research, The Ohio State University.

The most recent estimate of the graduation rate based on these data published by the U.S. Department of Education in February 1987 was 70.6 percent for 1985. This would produce a national dropout rate of 29.4 percent and dropout rates in the states that range from a low of 9.4 percent in Minnesota to a high of 45.3 percent in Louisiana. In comparison with previous years, the national rate represents a slight increase from 1984, when the dropout rate was 29.1 percent, but still a slight improvement over the 30.3 percent dropout rate for 1982.

As stated earlier in this section, the dropout rate estimated by the Department of Education is considerably higher than most other estimates. To a large degree, ED's estimate may be due to the method used to calculate the dropout rate. This methodology starts with a cohort of ninth-graders and charts their progression through high school -- either to graduation or non-completion. By estimating a dropout rate over a four-year period rather than over one year, it tends to produce a larger dropout rate. The method also includes as dropouts individuals who drop out of school and subsequently complete high school or an equivalent certificate -- again, producing a larger estimate of dropout rates.

Dropout Rates in Selected Regions and Geographical Areas

While most national estimates of the dropout rate fall with a range between 13 and 20 percent, several studies provide strong evidence of **the concentration of the dropout problem in particular regions of the country and in large city school districts.** High School and Beyond data indicate that dropout rates are higher in the South and West (16.6 percent and 16.5 percent respectively) than in the Northeast and North Central regions

(11.9 and 12.3 percent respectively) and higher in urban areas (18.1 percent) than in suburban and rural areas (12.8 percent and 14.3 percent respectively). (See Table 4.) However, as Barro (1984) points out, the relatively high incidence of dropouts in urban areas is found primarily in the Northeast (19.8 percent) and North Central (19.6 percent) regions. Dropout rates are about the same in urban and rural areas (17.3 and 17.2 percent respectively) in the South and higher in rural and suburban areas than in urban areas in the West. However, even in these regions, several large urban centers have very high dropout rates.

The concentration of dropouts in large cities is confirmed in a number of other studies. A recent sampling of large city school districts by the National Education Association found dropout rates at 30 percent in Boston, 35 percent in New York, 40 percent in Baton Rouge, 42 percent in Washington, D.C., and 58 percent in East Los Angeles (NEA, 1986). Another telephone survey by Pelavin Associates (1987) of a sample of large urban districts found similarly high dropout rates. Using a procedure established by the New York City Board of Education to compute a four-year dropout rate for high schools, the study estimated dropout rates of 33 percent in New York, 46 percent in Boston, 50 percent in Washington, D.C., 42 percent in Baltimore, 45 percent in Philadelphia, 48 percent in St. Louis, and 38 percent in Milwaukee.

While dropouts tend to be concentrated in large urban areas, **the research suggests that their concentration is heaviest in a core of inner-city schools.** An in-depth study of the Chicago Public Schools established a systemwide dropout rate of 43 percent for the class of 1982

TABLE 4

Percent of Public High School Sophomores Who Dropped Out Before Graduation by Geographic Region and Community Type

Region	Urban	Suburban	Rural	All Places
Northeast	19.8%	8.6%	11.4%	11.9%
South	17.3	15.8	17.2	16.6
North Central	19.6	10.3	10.7	12.3
West	14.6	16.9	17.0	16.5
United States	18.1	12.8	14.3	14.4

Source: High School and Beyond, Center for Education Statistics, U.S.Department of Education.

and a dropout rate of 56 percent for the 21 schools with the highest dropout rates (Chicago Panel on Public School Finances, 1985).

High dropout rates are also found in many rural areas. Research Triangle Institute (RTI), found, for example, in their study of the 13 Appalachian states for the Appalachian Regional Commission (1985), that dropout rates in Appalachia were about 5.5 percent higher than the national average. However, in the central and southern parts of the region dropout rates were respectively 25 and 59 percent higher than the national average. A more recent survey of state departments of education in a number of southern states found dropout rates ranging from 50 to 75 percent in some rural school districts in Mississippi and Tennessee (Pelavin Associates, 1987).

Return to the Educational System

Although a sizable proportion of American youth permanently terminate their formal education before completing high school, many students who drop out eventually return to the educational system to complete high school or obtain an alternative credential (Pallas, 1986). In their analysis of HS&B data, Kolstad and Owings (1986) found that nearly four out of ten dropouts from the 1980 sophomore class had completed their diploma requirements by the spring of 1984. An additional 13 percent had returned to school but either failed to graduate or were still enrolled at that time (Kolstad and Owings, 1986). Moreover, students who had completed more of their education before dropping out were more likely to return to school and complete their education: only 27 percent of the students who dropped out as sophomores completed their

graduation requirements, compared to 37 percent of juniors and 41 percent of seniors who dropped out (Kolstad and Owings, 1986).[12]

Rates of return to school are higher for males than females. (See Table 5.) Overall, young men who dropped out of school subsequently completed high school at a rate that was 10 percent higher than the rate for young women (39.7 percent compared to 36.0 percent). However, there were significant differences in rates of completion between males and females in different racial and ethnic groups. **Among whites, young male and female dropouts were about equally likely to return and complete high school, but among Hispanics, males were about 33 percent more likely to return and complete school than females, and black males were about 46 percent more likely to do so than black females.**

In addition to these differences in rates of return and completion between males and females, there are also differences among racial and ethnic groups. **Rates of return are higher for whites than for minorities.** The overall rate of return for whites (41.4 percent) was about 25 percent higher than for blacks (33.1 percent) and about 37 percent higher than for Hispanics (30.3 percent). However, because of the much lower rates of return and completion for black and Hispanic women, **white women have much higher rates of return relative to black and Hispanic women than white men have relative to minority men.**

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12 The HS&B data set does not include data on freshmen or middle school students. As a result, the estimate of a 50 percent rate of return to school is likely to be an overestimate, since students who drop out before their sophomore year are less likely to return to school (GAO, 1986; Kolstad and Owings, 1986). Kolstad and Owings "guestimate" a return rate for four years to be about 30 percent, i.e., three in ten dropouts would return to school and complete high school or its equivalent.

TABLE 5

Percent of 1980 High School Sophomores Who Dropped Out and Subsequently Graduated from High School by Sex and Racial/Ethnic Background

Racial/Ethnic Background	Total	Males	Females
Whites	41.4%	41.5%	41.2%
Blacks	33.1	38.2	26.1
Hispanics	30.3	34.1	25.7
All Groups	38.1	39.7	36.0

Source: High School and Beyond (1982 transcript data and 1984 follow-up data), unpublished tabulations, Center for Education Statistics, U.S. Department of Education.

Further evidence of the return to school and the completion of high school or its equivalent is found in CPS data. (See Table 6.) In 1985, 14.3 percent of the 18-to-19-year-olds had not completed high school and were not enrolled in school. However, for the 20-to-24-year-old age group, the proportion of non-completers was 14.0 percent and for 25-to-34-year-olds, it declined to 13.4 percent. Patterns for males reflect the overall population trend: a decline in the proportion of non-completers, from 16.3 percent for 18-to-19-year-olds to 14.9 percent for 20-to-24-year-olds. **For women,** however, the pattern is reversed: **the proportion of non-completers rises with the increasing age of the cohort.** Although this rise may to some extent be due to the higher dropout rates for females in earlier years, it may also be due to lower rates of return to and completion of high school in later years for females than for males.[13]

A closer inspection of the data suggests that **the return to school may primarily be a phenomenon that is associated with white males, since this is the only group which shows a consistent decline in the dropout rate with the aging of the population.** For white females and black males, the proportion of non-completers first increases before decreasing again; for black females and Hispanic males, the proportion decreases before increasing; and for Hispanic females, the proportion of non-completers continues to rise with the aging of the population. In short, the evidence suggests some reduction in the dropout population as youth who dropped out of high school return to complete some form of

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13 See the previous discussion of trends in dropout rates for males and females.

TABLE 6

Percent of the Adult Population Who Have Completed Less Than Four Years of High School and Who Are Not Enrolled in School, by Sex and Racial/Ethnic Background, October 1985

Racial/Ethnic Group	18-to-19-year-olds	20-to-24-year-olds	25-to-34-year-olds
Whites	13.8%	13.4%	12.6%
White Males	16.3	14.2	12.8
White Females	11.3	12.6	12.5
Blacks	17.3	17.7	19.0
Black Males	17.7	19.2	18.8
Black Females	16.9	16.5	19.1
Hispanics	30.6	31.8	40.1
Hispanic Males	42.2	33.7	39.1
Hispanic Females	19.9	29.7	41.2
Total Population	14.3	14.0	13.4
Males	16.3	14.9	13.4
Females	12.3	13.2	13.4

Source: U.S. Department of Commerce, Bureau of the Census, Population Characteristics, School Enrollment -- Social and Economic Characteristics of Students: October 1985, Series P-20, No. 409, September 1986.

education in later years. However, the return to school is not distributed evenly across all segments of the population.

The evidence also suggests that a large proportion of dropouts who do complete their high school education do not return to a regular school program (Pallas, 1986). Rather, they tend to complete an alternative program such as a General Equivalency Diploma (GED). According to Pallas (1986), the number of people taking the GED increased tenfold from 1961 to 1985. In 1985 over 440,000 persons met state requirements for obtaining a GED credential. As yet, relatively little is known about the social, economic and educational consequences of obtaining high school graduation credentials outside of regular day programs. However, as this type of degree becomes more prevalent, we will need to look more closely at both its short-term and long-term impact.

Summary

Although estimates of the dropout rate are not completely consistent in all respects, national surveys and other studies support the following conclusions about the scope of the country's dropout problem.

- **Between 600,000 and 700,000 youths and young adults between the ages of 14 and 24 drop out of school each year. This includes 325,000 to 375,000 males and 290,000 to 325,000 females.** In addition, about 4.3 million people between the ages of 16 and 24 are neither enrolled in high school nor have completed a high school diploma or its equivalent.

- **Dropout rates for males are currently higher than rates for females. Data from the CPS suggest, however, that this is a reversal of the pattern of earlier years. Up through the late 1970s, dropout rates for females exceeded rates for males.** However, a rise in the dropout rate for males up through the early 1980s, coupled with a steady decline in the dropout rate for females, has produced lower dropout rates for females.

- **Minorities drop out of school at higher rates than whites. However, since the mid-1970s, the dropout rate between blacks and whites has narrowed significantly. In contrast, the dropout rate for Hispanics has remained at consistently high levels.** Thus, in recent years, the Hispanic dropout rate is still more than twice the dropout rate of whites.

- **The current dropout rate is estimated in most national surveys to be between 13 and 18 percent.** The "Wall Chart" published by the U.S. Department of Education estimates the dropout rate at about 29 percent, but this may be due in part to the method used to calculate the rate.

- **The number of dropouts has declined steadily since the early 1970s.** From 1974 to 1985 the number of dropouts declined by about 26 percent -- from about 930,000 to about 690,000.

- **Dropout rates have declined dramatically over the last decade.** Data from the CPS indicate that dropout rates in the mid-1980s are only about 85 percent of the rates in the mid-1970s.

- Dropout rates are considerably higher than the national average in many of the nation's large urban areas and in some rural regions of the country. **In some central city and rural school districts, dropout rates are between three and four times the national average rate.**

Although a sizable proportion of American youth permanently terminate their formal education before completing high school, many students who drop out of school eventually return to complete high school or obtain an alternative credential. The research suggests that:

- **Nearly 40 percent of school dropouts may return to school and complete the requirements to graduate high school.** Moreover, students who have completed more of their education before dropping out, i.e., juniors and seniors, are more likely to return to school than students who dropped out in earlier grades.

- **Males are more likely than females to return to school and complete a high school diploma or an equivalent certificate.** There is some evidence from the CPS that the return to school may be primarily a phenomenon associated with white males since this is the only group which shows a consistent decline in the dropout rate with the aging of the population.

- **Many dropouts who complete their high school education do not return to a regular school program.** Many complete an alternative program such as a GED. As this type of alternative degree becomes more prevalent, research will be required to assess both its short-term and long-term benefits to students.

III. WHO DROPS OUT AND RETURNS TO SCHOOL?

In the preceding section, we examined the relative incidence of high school dropouts among different segments of the population and in different parts of the country. In this section, we examine other characteristics of high school dropouts, focusing particularly on differences in the characteristics of male and female dropouts. We also review the small body of literature that examines the interrelationship between student background characteristics and other factors associated with school dropouts. We conclude the section with a review of the characteristics of individuals who return to school after they have dropped out.

Characteristics of School Dropouts

Research on school dropouts has generally found that attrition from high school is related to three major clusters of factors:

- student and family background characteristics;
- educational attainment and school-related behaviors and attitudes; and
- out-of-school behavior.

Student and Family Background Characteristics

In terms of family background, dropouts typically come from homes with the following characteristics:

- Low socioeconomic status (Alexander, Ackland and Griffin, 1976; Bachman, Green and Wirtanen, 1971; Barro, 1984; Children's Defense Fund, 1974; Coombs and Cooley, 1968; Ekstrom et al., 1986; Howard and Anderson, 1978; Hoyt, 1962; Lerman, 1972; Lloyd, 1978; Mare, 1980; Peng, 1983; Rumberger, 1983; Shriber, 1962; Steinberg, Blinde and Chan, 1984; Stice and Ekstrom, 1964; Stroup and Robins, 1972);

- o Low educational attainment of parents; fathers and older siblings are likely to have dropped out of school themselves (Barro, 1984; Borus and Carpenter, 1984; Hill, 1979; Hill and Stafford, 1977; Mare, 1980).

- o Large family size (Barro, 1984; Hill, 1979; Mare, 1980; Rumberger, 1983);

- o Female-headed single-parent households (Howell and Frese, 1982; Masters, 1969; Neill, 1979; Rumberger, 1983; Shaw, 1982).

The family background characteristics of dropouts set out above are generally found for all students, regardless of gender and racial and ethnic backgrounds. However, in some cases, the patterns are different for males and females; in others, the background characteristic appears more or less strongly associated with dropping out for people of different gender or among racial/ethnic groups. We draw on Barro's analysis (1984) of the HS&B data to highlight the major points of difference.

Parents' Occupations

Parents' occupations are associated with differences in dropout rates for both males and females. Students with fathers in low-level occupations have dropout rates that are 115 percent greater than students with fathers in high-level occupations; students with mothers in low-level occupations are 75 percent more likely to drop out than students with mothers in high-level occupations. (See Table 7.) However, the relationship between father's occupation and dropout rate is stronger for females than for males. Females whose fathers are in low-level occupations have a dropout rate that is over one-and-one-half times the rate of females whose fathers are in high-level occupations; for males, the difference in dropout rates is about 89 percent. The relationship between father's occupation and dropout rates is strongest for white females (females with fathers in low-level occupations drop out

TABLE 7

Dropout Rates of Public High School Students with Different Socioeconomic Characteristics

	All Students	Males	All Females	Females: Whites	Females: Blacks	Females: Hispanics
All Races	14.4%	15.2%	13.5%	12.5%	14.1%	19.3%
Father's Occupation						
Professional/Technical	8.7	10.2	7.1	6.6	13.5	8.7
Mid-Level	14.0	14.7	13.2	12.5	12.2	18.6
Low-Level	18.7	19.3	18.2	17.9	16.4	21.4
Mother's Occupation						
Professional/Technical	10.6	12.2	8.9	8.3	8.9	14.3
Mid-Level	12.8	13.1	12.5	12.6	10.2	14.9
Low-Level	18.5	19.5	17.6	16.7	16.2	22.3
Homemaker	15.6	17.1	14.1	11.9	19.4	20.7
Father's Education						
Less Than High School	22.9	23.0	22.9	23.0	21.1	23.8
High School Graduate	13.7	14.5	12.9	12.5	10.0	18.0
Some College	10.5	11.6	9.4	9.6	9.5	8.7
College Graduate or More	6.8	9.2	4.3	3.7	6.1	12.5
Mother's Education						
Less Than High School	24.9	24.5	25.2	26.0	20.9	27.6
High School Graduate	12.6	14.3	10.6	9.8	13.5	13.8
Some College	12.0	13.5	10.7	11.3	7.5	11.0
College Graduate or More	7.2	8.3	6.0	4.8	6.3	16.2
Family SES						
Quartile 1 (Low)	22.3	22.9	21.8	23.7	16.7	22.8
Quartile 2	13.2	13.8	12.6	13.1	4.6	17.0
Quartile 3	10.7	11.7	9.7	9.7	10.3	9.4
Quartile 4 (high)	7.0	9.2	4.6	3.9	8.1	11.5

Source: High School and Beyond, Center for Education Statistics, U.S. Department of Education.

at nearly three times the rate of females with fathers in high-level occupations), nearly as strong for Hispanic females, and much weaker for blacks.

Parents' Educational Attainment

The relationship between dropping out and parents' education is even stronger than that with parents' occupation (Barro, 1984). With each successive level of parents' education, the dropout rate decreases for both males and females. However, **parents' education appears to be more strongly related to dropout rates for females than for males.** When all levels of education are considered, females whose fathers have completed less than a high school education have dropout rates that are over five times the rate of females whose fathers have completed college or above; similarly, females whose mothers have completed less than a high school education have a dropout rate that is over four times that of females in the highest education group. For males the ratios are only 2.5 to one and three to one respectively. Parents' education is related to dropout rates for all females, but again the effects are greater for white females than for minorities.

Completion of a high school education by both parents -- but especially by the mother -- has a particularly strong relationship with dropout rates for females. Girls whose mothers have completed less than a high school education have a dropout rate that is almost 2.4 times the rate of females whose mothers have graduated high school; for males the rate is only 71 percent higher. As in the case of education generally, completion of high school by the mother is most strongly associated with lower dropout rates for white females than for minority women.

Composite Index of Socioeconomic Status

The relationship between dropout rates and socioeconomic status (SES) is similar to that of parents' education,[14] i.e., dropout rates in the lowest SES quartile average about three times the rate in the highest quartile. However, female rates again appear more sensitive to variations in SES than male rates (Barro, 1984). Females from families in the lowest SES quartile are nearly five times as likely to drop out as females with families in the highest SES quartile; males from families with the lowest SES are only two-and-one-half times more likely to drop out than those from the highest SES families. Again the differences are more pronounced for white than for minority females. White females from families in the lowest SES quartile drop out at six times the rate of females in the highest SES families; for blacks and Hispanics, dropout rates from the lowest to the highest SES quartiles differ by a factor of only about two to one.

Presence of Parents in the Home

The presence of parents in the home -- or their absence from the home -- is associated with differences in dropout rates. (See Table 8.) **For all students, having only one parent in the home is associated with a higher dropout rate than having both parents** (a 66 percent higher rate if the one parent is female and a 78 percent higher rate if the parent is male); **having no parent in the home is associated with an even higher dropout rate** (2.5 times as great as the dropout rate with both parents in the home). However, dropout rates for males appear to be more sensitive

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14 This would be anticipated since mother's and father's education were two of the five items that made up the composite SES index.

TABLE 8

Dropout Rates of Public High School Students with Selected Background Characteristics

	All Students	Males	All Females	Females: Whites	Females: Blacks	Females: Hispanics
Presence of Parents in Home						
Both	12.2%	12.7%	11.7%	11.2%	11.7%	14.8%
Female Only	20.2	22.7	17.9	16.5	16.1	27.6
Male Only	21.7	23.6	19.5	18.2	13.5	27.9
Neither	31.1	29.5	32.8	36.7	21.8	40.8
Mother Worked While Student Was In:						
Both Elementary and High School	13.7	13.9	13.5	13.4	10.6	18.9
High School Only	10.7	11.6	9.8	9.0	19.6	11.7
Elementary School Only	17.3	21.4	13.4	12.7	16.3	15.2
Neither	12.4	12.6	12.1	9.5	19.9	21.6

Source: High School and Beyond, Center for Statistics, U.S. Department of Education.

to the absence of a single parent than females, while females' rates are more sensitive to the absence of both parents than male rates (Barro, 1984).

Mother's Work Status

Mother's employment is not consistently associated with differences in dropout rates. Compared with students whose mothers who did not work at all, dropout rates are lower for students whose mothers worked only while the students were in high school, slightly higher for students whose mothers worked in both elementary and high school, and significantly higher for students whose mothers worked in elementary school only. Dropout rates for females, however, are relatively lower than rates for males where mothers worked either in elementary school only or in high school only, but about the same where mothers worked in both elementary and high school. In other words, mother's employment appears to have a less adverse effect on females' completion of school than on males' school completion.

Educational Attainment and School-Related Behavior

In addition to student and family background characteristics, student performance in school is typically associated with differences in dropout rates (GAO, 1986; Cipollone, 1986). Students who are more likely to drop out have histories of school failure as evidenced by:

- Lower academic achievement and lower test scores than peers who choose to remain in school (Alexander, Ackland and Griffin, 1976; Bachman, Green and Wirtanen, 1971; Barro, 1984; Cook, 1956; Howell and Frese, 1982; Lloyd, 1978; Stice and Ekstrom, 1984);
- Retention in earlier grades (Bachman, Green and Wirtanen, 1971).

They also have a history of behavioral problems in school as evidenced by absenteeism, truancy, and disciplinary actions (Howell and Frese, 1982;

Stroup and Robins, 1972; Wehlage and Rutter, 1986). Finally, there are a host of individual factors that have been found to be associated with dropping out. Dropouts have:

- Lower levels of self-esteem and less sense of self-control of their lives than other students (Bachman, Green and Wirtanen, 1971; Cervantes, 1985; Ekstrom et al., 1986; Sewell, Palmo and Manni, 1981; Steinberg, Blinde and Chan, 1984; Stice and Ekstrom, 1964);
- Lower educational aspriations (Ekstrom et al., 1986; Wehlage and Rutter, 1986) and less involvement in the extracurricular and social life of their schools (Coombs and Cooley, 1968).

Although data from HS&B support previous research findings about the characteristics of dropouts, they also find some important differences among males and females. Drawing again from Barro's analysis (1984), the most important male-female differences in school performance and behaviors are discussed below.

Student Ability and Academic Performance

Dropout rates decline, as expected, as students' academic ability measured on test scores increases. (See Table 9.) For all students, the dropout rate in the lowest-ability quartile is over eight times the rate in the highest-ability group and rates show a steady decline with increases in student ability. **Differences in dropout rates are, however, greater for females than males (females in the lowest-ability group have dropout rates nearly ten times the rate of females in the highest-ability group, as compared with a little over seven times the rate for males) and much greater for white females than for minorities (the low/high dropout ratio for white females is nearly 12 to one, compared to 5.5 to one for blacks).**

TABLE 9

Dropout Rates of Public High School Students With Different Academic Ability and School-Related Experiences

	All Students	Males	All Females	Females Whites	Females Blacks	Females Hispanics
A Student Ability						
Quartile 1 (low)	26.5%	28.3%	24.9%	28.2%	20.1%	23.8%
Quartile 2	14.7	15.4	14.1	16.3	3.2	11.0
Quartile 3	7.8	8.6	7.0	6.6	5.4	15.0
Quartile 4 (high)	3.2	3.9	2.5	2.4	4.6	4.4
Self-Reported High School Grades						
A	1.4	1.6	1.2	1.0	4.7	1.0
A/B	6.7	5.4	7.7	6.9	9.9	11.9
B/C	14.3	14.3	14.3	14.7	12.4	14.8
C/D	35.4	32.4	40.8	42.2	28.3	46.6
D/F	82.9	81.1	86.0	87.9	87.9	78.7
Held Back/ Repeated a Grade						
No	12.4	13.0	11.9	10.9	12.8	18.4
Yes	27.2	27.6	26.5	27.8	22.5	26.9
Age at Beginning of Ninth Grade						
Under 14	9.0	10.5	7.8	8.0	6.1	10.8
14	8.5	8.1	8.9	7.9	8.5	17.8
14 1/4	9.9	9.6	10.1	9.8	9.8	12.2
14 1/2	11.8	12.5	11.2	10.5	9.8	17.8
14 3/4	13.2	13.5	13.0	13.8	8.4	12.2
15-15 1/4	23.7	23.2	24.4	24.9	21.9	25.4
15 1/2 +	42.1	40.7	44.3	43.9	48.4	42.3
Disciplinary Problems						
Yes	28.0	28.1	27.8	27.5	24.3	33.4
No	10.0	9.9	10.2	9.7	10.0	13.7
Suspended or Probation						
Yes	32.7	31.8	34.3	35.4	25.9	38.6
No	10.7	10.7	10.7	9.9	11.3	15.2

Source: High School and Beyond, Center for Statistics, U.S. Department of Education.

Grades in school are also associated with differences in dropout rates for both males and females. However, for all grade categories except the highest (A), females drop out at a rate that is greater than or equal to the rate for males. According to Barro (1984), this may be due to the fact that a higher proportion of females than males report grades in the highest categories (A and A/B).

Progression Through School

Dropout rates are higher for students who are overage when they enter ninth grade than students who enter at the appropriate age. Students who are 15 1/2 or older have dropout rates that are nearly five times higher than those of students who are 14 when they enter ninth grade. The increase in dropout rates with each increment in age from 14 to 15 1/2 is evident for all males and females, but among females the increase is less linear for black and Hispanic females than for whites. Overall, the difference in dropout rates between females who enter ninth grade at age 14 and age 15 1/2 is greatest for blacks, nearly as great for whites, and much lower for females of Hispanic background.

Disciplinary Problems

There is a remarkably uniform relationship between disciplinary problems and dropping out of school. Students who have had disciplinary problems or who have been suspended or on probation drop out at about three times the rate of students without these behaviors (Barro, 1984). However, as with other factors discussed above, discipline problems are not independent factors that necessarily explain a student's decision to drop out of high school. In many cases, they are symptoms of a student's inability to function acceptably in the school or in the larger social environment.

Out-of-School Behaviors

Students' out-of-school behaviors such as marriage/parenting status and employment for pay are frequently cited as factors which limit students' ability to continue their high school education. Research on the HS&B data provides some evidence to support these contentions.

Marriage and Children

Dropout rates are substantially higher among youth who are married or have children -- or both -- than the rest of the student population. (See Table 10.) According to Barro (1984), **both male and female students who are married have dropout rates of nearly 60 percent; females and males with children have dropout rates of 50 and 30 percent respectively; and those who are both married and have children have dropout rates of nearly 75 percent. Among females, HS&B respondents who were either married or had children accounted for over 40 percent of the dropouts in the HS&B follow-up survey.**

Employment While in School

Students who work for pay in school drop out at a slightly higher rate than those who do not. This applies to males and black females, but not to white and Hispanic females. However, for females the dropout rate increases dramatically with only 15 hours of employment, while for males, the dropout rate rises significantly only with longer hours of employment. For females, the dropout rate for students who work between 15 and 21 hours per week is about 73 percent higher than the rate for females who do not work at all; for males, it is only about 45 percent higher. With longer hours of employment (22 or more hours) the dropout rate increases significantly for males but only marginally for females.

TABLE 10

Dropout Rates of Public High School Students With Different Out-of-School Experiences

Out-of-School Experiences	All Students	Males	All Females	Females Whites	Females Blacks	Females Hispanics
Worked for Pay While in School						
Yes	15.7%	18.6%	12.4%	11.1%	16.6%	18.5%
No	13.3	12.4	14.2	13.7	12.7	19.6
Hours Worked Per Week						
None	11.5	10.5	12.1	10.7	11.8	17.9
1-14	11.1	11.9	10.4	9.1	15.6	16.1
15-21	17.6	15.2	21.0	20.5	9.6	33.3
22 or more	22.5	22.8	21.9	23.6	14.0	22.1
Marital and Parenting Status						
Unmarried, No Children	11.2	14.4	7.9	7.3	9.4	10.4
Married, No Children	59.3	57.6	59.6	59.5	-	-
Unmarried, Children	45.3	31.9	51.4	61.1	-	-
Married, Children	74.8	72.1	75.4	75.7	-	-
Serious Trouble with Law						
Yes	32.6	33.6	28.4	27.1	29.5	35.9
No	13.4	13.6	13.2	12.2	14.3	18.7

Source: High School and Beyond, Center for Education Statistics, U.S. Department of Education.

Interactions Among Characteristics

Although student and family background characteristics and student attitudes and behaviors are all associated with dropping out of high school, the relative impact of each of these factors on dropping out has been explored in only a preliminary way in a limited number of studies. In general, these studies focused on the interrelationship between racial/ethnic background and various socioeconomic characteristics. **Several studies** (Borus and Carpenter, 1984; Ekstrom, Goertz, Pollack and Rock, 1986; Howell and Frese, 1982) **found that after controlling for other factors such as being from a poverty home and other socioeconomic characteristics as father's education, blacks are more likely to stay in school than whites.** Rumberger's study based on the National Longitudinal Study of Youth Labor Market Experience similarly finds that interracial differences in dropout rates are substantially reduced when other family background factors are held constant (Rumberger, 1983). **On the other hand, Steinberg, Blinde and Chan (1984) cite research that indicates higher dropout rates for Hispanics than for other racial and ethnic groups, even controlling for socioeconomic background.**

A recent study by Barro and Kolstad (1987) explores further the interrelationship between family background characteristics, locational and educational factors, educational experiences and school factors, student behaviors and dropout rates of public school students. Using an event-history methodology with data from the High School and Beyond data base, Barro and Kolstad find that **when socioeconomic and other family background factors are controlled, males still drop out of school at higher rates than females.** Controlling for background factors in fact

increases the gap in dropout rates between males and females in public schools from about 13 percent to nearly 20 percent. It also changes the relative dropout rates of whites and minorities. **When socioeconomic and other family background factors are controlled, blacks have lower dropout rates than whites and Hispanics have only slightly higher rates than whites. (This finding applies for males and females, in addition to the overall student population.)** Barro and Kolstad thus conclude that the entire black-white difference in dropout rates and much of the Hispanic-white difference is accounted for by factors other than race per se.

Several other findings about dropout rates emerged from the Barro-Kolstad mulitvariate analysis. One finding is that socioeconomic factors continue to have a strong relationship with dropout rates, even when other variables are taken into account. Students with the least favorable background characteristics -- those with parents in low-level jobs, parents who are relatively uneducated, who come from one-parent households and large families -- are three to five times more likely not to complete high school than students from advantaged backgrounds. **Second, even when demographic and socioeconomic characteristics of students are controlled, there are differences in dropout rates in different regions of the country. Overall, dropout rates are higher in the South and West than in the Northeast and North Central regions, and location in an urban area increases the probability of dropping out more in the Northeast and North Central regions than in the South and West.** Finally, working while in school, marriage and childbearing, and antisocial behavior continue to show strong relationships with the probability of dropping out, even when other factors are held constant. **Both childbearing and marriage are**

associated with extraordinarily high rates of dropping out among females, and marriage has a significant positive relationship to males dropping out as well (Barro and Kolstad, 1987).

Characteristics of Returners to School

As indicated previously, a significant proportion of high school dropouts ultimately return to school and complete a high school diploma or an equivalent. Analyses of HS&B generally find that student characteristics that relate positively to the probability that students will drop out of school relate negatively to the probability that they will return (Barro, 1984; Kolstad and Owings, 1986). Put another way, students who are most likely to drop out are least likely to return. Males are slightly more likely to resume their education than females and whites are much more likely to return to school than blacks and Hispanics. Dropouts who return to school are more likely to have higher academic ability, to come from higher SES families, to come from the South and West and to live in rural and suburban areas rather than central cities. Being married and having children is associated with a higher probability of returning to school for males than females; the latter are more likely to return to school if they are not married and do not have children. Where males may reevaluate the importance of education and resume their studies at above-average rates, females may be less able to do so because of family responsibilities.

Summary

In summary, the research on the school dropouts has begun to explore more fully the characteristics of school dropouts and the relationships between student and family background characteristics, school experiences and out-of-school behavior with dropout rates. Although we are not yet able to determine with certainty which factors will predict that students will drop out from school, the research does identify factors that are associated with dropout behavior. More recent research also has begun to differentiate male and female dropouts and the factors that may affect their respective decisions to leave school. It indicates that:

- Dropouts come disproportionately from families that are low in socioeconomic status, single-parent, headed by females, and large in size. Parents and older siblings are also likely to be school dropouts.

- **Completion of a high school education by both parents -- but especially the mother -- has a particularly strong relationship with dropout rates for females.** Girls whose mothers are high school dropouts drop out of school at almost 2 1/2 times the rate of girls whose mothers have completed high school. **Mother's education has a particularly strong association with dropout rates for white females.**

- Females drop out at lower rates than males where mothers worked only in elementary school or only in high school, but at about the same rate where mothers worked in both elementary and high school. Mother's employment therefore may have a less adverse effect on females' than males' decisions to leave school.

- Dropouts have a school history that is marked by low academic achievement, low test scores and retention in earlier grades. They also are more likely to have a record of high absenteeism, truancy and disciplinary actions.

- **Females with the lowest academic ability drop out of school at a lower rate than males in the lowest-ability group.** However, females in the lowest-ability group drop out of school at nearly ten times the rate of females in the highest-ability group; for males, the ratio is only a little over seven to one.

- **Students who are married, have children, or both drop out of school at much higher rates than the rest of the student population.** In the High School and Beyond surveys, females who were married or had children accounted for over 40 percent of the female dropouts.

- Students who work for pay drop out of school at slightly higher rates than those who do not work. However, the dropout rate for females increases with relatively fewer hours of employment, while for males it increases dramatically only with longer hours of work.

- Students with the characteristics most strongly associated with dropping out are those least likely to return to school once they have dropped out. Individuals **most likely to return to school are male, white, higher in academic ability and from families of higher socioeconomic status.**

- **Being married and having children in is associated with a higher probability of returning to school for males than females.** Where males may reevaluate the importance of education and return to school, females may be less able to do so because of family responsibilities.

IV. WHY STUDENTS DROP OUT

The information on the characteristics of dropouts presented above is of value to policy makers and practitioners in several respects. Most important, because it identifies some of the children who are "at risk" or have a "propensity" to leave school, it may assist the development of programs to meet these childrens' special needs and help them stay in school. However, as many observers note, there are limits to the utility of this research.

First, many of the behaviors associated with dropping out, e.g., poor academic performance and retention in grade, may not be the "causes" of students' decisions to leave school but rather the consequences of the same forces that are responsible for them dropping out (Lyke, 1985; GAO, 1986). Children who come to school with personal and family problems may have difficulty with their school work and may consequently attain poor grades. Academic failure may then contribute further to a lack of self-esteem and the desire not to continue further in school. However, it is certainly not clear how these factors interact to lead students to drop out of school.

Second, even though students who drop out may have a disproportion of certain characteristics or behaviors, **the propensity to drop out may develop at different ages for children in different settings.** For some children, problems in adjustment to school and academic performance -- and the potential to drop out -- develop early in a child's school career; for others, events that occur in middle school or junior high school may precipitate the decision to leave school (California State Department of Education, 1986). In essence, there is no profile of the school dropout.

Rather, students drop out for reasons that are uniquely associated with their particular situation.

Finally, some argue that the research on school dropouts, while noble in intent, focuses on an aspect of the dropout problem -- namely, student and family background characteristics -- that does not have direct implications for shaping school policy and practice (Wehlage and Rutter, 1986). Moreover, by focusing on the relatively fixed attributes of students, the research may give schools an excuse for the lack of success with the dropout (Wehlage and Rutter, 1986).

The need to better understand the factors that motivate students' decisions to drop out of school has resulted in several studies of this topic, including the recent studies of data from High School and Beyond (Applebaum and Dent, 1984; Bachman, Green and Wirtanen, 1971; Kumer and Bergstrand, 1979; Peng and Takai, 1983; Research Triangle Institute, 1985; Resta and Temple, 1978). The findings of these studies are presented below.

School-related factors are reported by a large minority of students as a major reason for their decision to leave high school. (See Table 11.) About one third of the dropouts in the HS&B sample (both males and females) cited "poor grades" and "school was not for me" as the major reason for dropping out (Ekstrom et al., 1986). Males, however, were more apt to cite the inability to "get along with teachers" and discipline problems such as suspension or expulsion from school as reasons for dropping out of school than females (Peng, 1985; Ekstrom et al, 1986). Problems in adjusting to school, disciplinary problems and poor grades were also reported to be the key reasons for leaving high school in

TABLE 11

Reasons 1980 Sophomore Dropouts Reported for Leaving High School Before Graduation, by Sex

Reasons	Percent	
	Male	Female
School-related		
Expelled or suspended	13.0	5.3
Had poor grades	35.9	29.7
School was not for me	34.8	31.1
School ground too dangerous	2.7	1.7
Did not get into desired program	7.5	4.5
Could not get along with teachers	20.6	9.5
Family-related		
Married or planned to marry	6.9	30.7
Was pregnant	N/A	23.4
Had to support family	13.6	8.3
Peer-related		
Friends were dropping out	6.5	2.4
Could not get along with students	5.4	5.9
Health-related		
Illness or disability	4.6	6.5
Other		
Offered job and chose to work	26.9	10.7
Wanted to enter military	7.2	0.8
Moved too far from school	2.2	5.3
Wanted to travel	7.0	6.5

Source: High School and Beyond, NCES 93-221b, National Center for Education Statistics, U.S. Department of Education, cited from Table 8, "High School Dropouts: A National Concern," by Samuel S. Peng, National Center for Education Statistics, March 1985.

several other studies (Applebaum and Dent 1984; Kumer and Bergstrand, 1979; Resta and Temple, 1978).

Family-related problems comprise a second group of reasons that both males and females report as the basis of their decision to drop out, although different factors appear to affect males' and females' decisions. **Females report marriage or plans for marriage over four times as frequently as males as the reason for leaving high school** (31 percent compared to 7 percent), **while males report the need to provide family support more frequently than females** (14 percent compared with eight percent). Nearly one fourth of all females report pregnancy as a reason for leaving school -- a reason that is confirmed in a number of other studies (Resta and Temple, 1978; Rumberger, 1983).

The opportunity to work is a third major reason for dropping out of high school. Overall, about 19 percent of the HS&B sample of dropouts reported a job offer and the decision to work as a reason for leaving high school. However, **the opportunity to work was reported as the reason for dropping out about 2.5 times more frequently by males than by females** (27 percent compared to 11 percent), **suggesting that economic factors motivate males' decisions to leave high school more than females'** (Cipollone, 1986).

In sum, a variety of school-related, personal and economic factors influence the decision of individual students to drop out of school. The primary school-related reasons such as "school was not for me" and poor grades, however, suggest that the decision to drop out may not be a one-way street. While individual students may have difficulty adjusting to school, schools may also contribute to the dropout problem by failing

to meet students' needs or through policies that encourage students to drop out (Wehlage and Rutter, 1986). Low teacher expectations of students, discouragement of active student participation in the learning process, tracking, and lack of fairness in the implementation of discipline policies may work to "push out" at-risk youth from school rather than support them in their efforts to finish their high school education (Fine, 1986; IEL, 1986). At present, the impact of school policies on students' decisions to drop out has not been fully established. Additional research may, however, provide new insights about this topic in the future.

Summary

Students drop out of school for a variety of reasons. These include problems with school, economic problems, and a variety of family-related concerns. While some of these reasons apply to both males and females, some reasons for dropping out apply more to students of one gender than the other. The research finds:

- Males are more likely than females to cite the inability to "get along with teachers" and discipline problems such as suspension or expulsion from school as a reason for dropping out of school.
- **Females report marriage or plans for marriage over four times as frequently as males as the reason for leaving high school. Females also cite pregnancy as a reason for discontinuing their high school education.**
- **Economic factors motivate males' decisions to leave high school more than females'.** The opportunity to work is reported much more frequently by males than females as their reason for dropping out of school. Males also report the need to provide family support more frequently than females.

V. THE CONSEQUENCES OF DROPPING OUT

The concern for dropouts is predicated on the belief that dropping out of high school has negative consequences both for the individual and for society. By and large, the research on the consequences of dropping out tends to support this view.[15] Individual dropouts may have difficulty finding and maintaining steady employment and, over the course of their working life, suffer losses in earnings. Society may suffer because unemployment and lost earnings lower tax revenues and increase the demand for social services (Rumberger, 1986). In the section that follows, we review the major consequences of dropping out for the individual dropout and for society at large.

Individual Consequences

One of the most immediate consequences of dropping out of high school is a lower level of academic achievement. Ekstrom, Goertz, Pollack and Rock (1986) find, in their analysis of HS&B data, that staying in school has a positive impact on achievement and that staying in an academic and, to a lesser extent, a general curriculum leads to larger gains than staying in the vocational curriculum. They find further that females, and to a lesser extent minorities, are the "biggest

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15 Dropping out could be beneficial for some students who are not getting anything out of school or who may be more successful in the job market. Wehlage and Rutter (1986), for example, found in a recent study that dropouts showed equal or greater improvements in self-esteem and a sense of control than high school graduates. However, on balance, the negative consequences of dropping out appear to outweigh the positive.

losers" when they drop out of school. Blacks and females fall furthest behind in language development (vocabulary, reading and writing) but not as far behind in science and mathematics since minorities and females tend to take fewer high school courses in these areas than whites and males. Similarly, Alexander, Natriello and Pallas (1985) find that dropouts, on average, have lower high school skills than graduates, even when controlling for personal background characteristics.

In addition to these losses in educational attainment, some research suggests that dropouts often experience a diminished sense of self-worth and power, less personal satisfaction about life and the quality of life available, and increased health problems (Citizens Council for Ohio Schools, 1984). Some recent evidence does, however, suggest that the personal consequences may not be all negative. Wehlage and Rutter (1986) for example, found in a recent study that dropouts showed greater improvement in self-esteem and a sense of self-control than high school graduates. Although the evidence on the personal consequences of dropping out on the individual is mixed, on balance, it seems to support the view that dropping out has negative effects on the individual's psychological and social well-being.

Employment

Dropping out of high school has adverse effects on the labor market opportunities of both young adults and on older members of the work force. These effects are evident in two key areas: rates of employment (and unemployment); and the type of employment dropouts and graduates obtain. Data from the National Longitudinal Surveys of Labor Market Experience show that among youth age 18 to 22 who were not in school in 1979: 1) only about three fourths of the dropouts were in the labor

force, compared with about nine tenths of the graduates; and 2) dropouts had an unemployment rate that was almost triple the rate of high school graduates (GAO, 1986).

More recent data from the Bureau of Labor Statistics reconfirm this finding. In March 1986, the employment rate for adult youths age 18 to 24 who had completed four years of high school was about 44 percent higher than the employment rate of dropouts; for adults age 25 to 44, the employment rate for graduates was 36 percent higher than the rate for dropouts; and for 45-to-64-year-olds, it was 28 percent higher. Thus, while the advantage that graduates have over dropouts in employment decreases with age, it is nonetheless evident for all age groups in the adult population (Bureau of Labor Statistics, 1986).

While high school dropouts generally have poorer labor market opportunities than high school graduates, **completion of high school tends to improve the employment opportunities for females relative to males both in the short-term and over the course of adults' working life.** A comparison of the employment rates of 16-to-24-year-olds who either graduated or dropped out of high school between October 1984 and October 1985 demonstrates the differential effect of high school completion on employment for males and females in the first year immediately following termination from school. (See Table 12.) It shows that, while employment rates of both male dropouts and high school graduates exceed the rates for females, **high school completion increased the female employment rate by 68 precent and the male rate by only 28 percent. Where female dropouts had an employment rate that was only 70 percent of that of their male counterparts, completion of high school raised the female employment rate to 90 percent of the male rate.**

TABLE 12

Employment Rates[1] of Recent Dropouts and Graduates, Age 16 to 24, by Sex and Race, October 1985

Population[2] Group	Dropouts		Graduates[3]		Graduate/Dropout
	Percent Employed	Female/Male Employment Ratio	Percent Employed	Female/Male Employment Ratio	Employment Ratio
All Males	50.8%	--	65.0%	--	1.28
All Females	35.4	.70	59.3	.91	1.68
White Males	53.9	--	69.9	--	1.30
White Females	38.9	.72	67.7	.97	1.74
Black Males	37.7	--	41.0	--	1.09
Black Females	20.6	.55	29.8	.73	1.45
All Groups	43.5	--	62.0	--	1.43
Whites	46.7	--	68.8	--	1.47
Blacks	29.5	--	34.4	--	1.17

1 Employment rates are computed by dividing the number of people employed by the civilian noninstitutional population.

2 The population group includes only 16-to-24-year-olds who graduated or dropped out of high school between October 1984 and October 1985 who are part of the civilian noninstitutional population.

3 Graduates include 16-to-24-year-olds who are high school graduates who are not enrolled in college.

Source: Sharon R. Cohany, "What happened to the high school class of 1985?" Monthly Labor Review, U.S. Department of Labor, Bureau of Labor Statistics; unpublished data, U.S. Department of Labor, Bureau of Labor Statistics.

High school completion has the most beneficial effect on employment rates of white females in the period immediately following termination from high school. (See Table 12.) The employment rate for white female graduates is about 74 percent higher than the rate for dropouts (67.7 percent compared to 38.9 percent) and the ratio of employment relative to white males rises from 72 percent of the male rate for dropouts to 97 percent for graduates. Black female graduates also improve their employment rate relative to dropouts (the employment rate for graduates is about 45 percent higher than the rate for dropouts) and their employment rates relative to black males (for graduates, the female/male employment ratio is about 73 percent, while for dropouts it is only 55 percent). However, in the period after termination of school, black females -- both dropouts and graduates -- have the lowest employment of all four groups.

The relative advantage in employment that completion of high school provides for females in the period after termination of school appears to carry over into both the youth labor market[16] and the later working years. Among youth in the 18-to-24-year-old age group, males consistently have higher employment rates than females. (See Table 13.) (Employment rates for male and female dropouts in March 1986 were 55.5 percent and 37.5 percent respectively; for graduates, they were 74.6 percent for males and 61.9 percent for females.) However, **the gap in employment rates between females and males consistently decline with the**

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16 The youth labor market is generally defined as the 16-to-24-year-old age cohort. However, since the large majority of 16 and 17-year-olds are still enrolled in school, this analysis uses 18-to-24-year-olds as the age group for discussing the relationship between high school completion and rates of employment.

TABLE 13

Employment/Population Ratios for Youth Age 18 to 24, March 1986

Population Group	18-to-19-Year Olds		20-to-24-Year-Olds		18-to-24-Year-Olds	
	Less Than Four Years High School	High School Education	Less Than Four Years High School	High School Education	Less Than Four Years High School	High School Education
Males	45.4%	58.6%	64.9%	80.9%	55.5%	74.6%
Females	38.4	57.3	36.8	64.0	37.5	61.9
White Males	49.8	61.9	69.6	83.8	60.0	77.6
White Females	42.5	62.0	40.6	67.7	41.4	65.9
Black Males	26.3	37.7	45.0	65.6	36.5	57.8
Black Females	12.8	33.3	19.5	45.1	16.6	41.9
Hispanic Males	46.1	45.6	75.5	80.8	65.3	73.4
Hispanic Females	25.5	55.3	36.1	58.1	32.6	57.3
Total Population	42.4	57.9	51.1	72.1	47.1	67.9

Source: U.S. Department of Labor, Bureau of Labor Statistics, Office of Employment and Unemployment Statistics. "Educational Attainment of Workers, March 1986." Table 1, "Labor Force Status of the Civilian Noninstitutional Population 16 Years Old and Over, by Age and Years of School Completed." August 1986.

completion of four years of high school. Among 18-to-19-year-olds, the employment rate for females increases from 85 percent of the male rate for dropouts to 98 percent of the male rate for graduates; for 20-to-24-year-olds, the increase is from 57 percent to 79 percent; and for the total 18-to-24-year-old age group, the increase is from 68 percent to 83 percent.

Completion of four years of high school appears to reduce the gap in female/male employment rates more for minority females than for whites. (See Table 13.) In March 1986, the employment rate for black female dropouts 18-to-24-years-old was only 45 percent of the rate of black males; for graduates the employment rate was 72 percent of the male rate. The same pattern was found for Hispanics, where the dropout rate for females was only 50 percent of the male rate among dropouts and 78 percent of the male rate among graduates. For whites, in contrast, the ratio of female/male employment rates increased much less: from 69 percent for dropouts to 85 percent for graduates. Although white females had employment rates that were closer to male rates than minority females, completion of high school reduces the gap in employment rates between males and females less for white than minority women.

The relative benefits for females of completing high school appear to continue into adults' later working years. (See Table 14.) Among the 25-to-64-year-old age group, employment rates for males were again consistently higher than rates for females, both for dropouts and for high school graduates. However, as with the youth population, completion of four years of high school reduced the gap in the employment rate between males and females. Among 25-to-44-year-olds, the female/male employment rate increased from 62 percent for dropouts to 76 percent for high school

TABLE 14

Employment/Population Ratios for Adults Age 18 to 64, March 1986

Population Group	18-to-24-Year-Olds		25-to-44-Year-Olds		45-to-64-Year-Olds	
	Less Than Four Years High School	High School Education	Less Than Four Years High School	High School Education	Less Than Four Years High School	High School Education
Males	55.5%	74.6%	73.0%	86.7%	62.0%	77.0%
Females	37.5	61.9	44.9	66.2	36.1	53.5
White Males	60.0	77.6	75.9	88.2	62.9	77.2
White Females	41.4	65.9	45.5	66.6	35.4	52.7
Black Males	36.5	57.8	58.2	77.0	58.6	76.8
Black Females	16.6	41.9	41.6	64.3	39.1	61.6
Hispanic Males	65.3	73.4	75.4	84.8	71.1	76.2
Hispanic Females	32.6	57.3	39.2	58.7	32.8	56.9
Total Population	47.1	67.9	52.7	71.9	54.2	69.6

Source: U.S. Department of Labor, Bureau of Labor Statistics, Office of Employment and Unemployment Statistics. "Educational Attainment of Workers, March 1986." Table 1, "Labor Force Status of the Civilian Noninstitutional Population 16 Years Old and Over, by Age and Years of School Completed." August 1986.

graduates; among 45-to-64-year-olds, the employment rate increased from 58 percent to 69 percent with completion of high school. Among older women, however, completion of high school increased the employment rate of females relative to males more for Hispanics than whites and least for blacks.

In summary, four years of high school education is associated with higher rates of employment for all segments of the population at all stages of participation in the labor force. However, while employment rates for males are consistently higher than rates for females, both among dropouts and high school graduates, completion of high school is associated with a reduction in the gap in employment rates between females and males.

Type of Employment

In addition to lower rates of employment, dropouts tend to be employed in lower skilled jobs than high school graduates (GAO, 1986). Only a small percentage of high school dropouts are employed in higher-paying managerial and professional positions compared to high school graduates. Among 16-to-24-year-olds who were employed in year-round, full-time wage and salary positions in March 1986, high school dropouts were employed in managerial and technical positions at only about 39 percent of the rate of graduates.[17] For the 25-to-44-year-old population, the proportion was 41 percent, and for the 45-to-64-year-olds, it was only about 36 percent. Similar differences are evident in technical and precision production positions. Dropouts age 16 to 24 were

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17 Data are reported here for 16-to-24-year-olds rather than 18-to-24-year-olds since the Bureau of Labor Statistics (BLS) does not break out types of employment by age within this group.

employed in these higher-paying positions in March 1986 at only about 65 percent of the rate of high school graduates; for workers age 25 to 44 and 45 to 64, the proportions were 64 percent and 59 percent respectively.

At the other end of the spectrum, high school dropouts are more heavily concentrated in lower-paying service occupations and as machine operators, fabricators and laborers. In March 1986, dropouts age 16 to 24 were employed in these positions at 1.6 times the rate of high school graduates. In addition, the concentration of dropouts in these lower-paying positions increases with age. Dropouts age 25 to 44 were employed in service and operators positions at 1.8 times the rate of high school graduates; for adults age 45 to 64, the ratio was nearly 2.2 to one.

In contrast with rates of employment, however, **completion of high school does not have a consistent effect on the type of occupation of males and females.** Focusing first on higher-paying managerial and professional positions, we find that **completion of high school works more to the advantage of males than females.** Among 16-to-24-year-olds, male graduates are employed in managerial and professional positions at nearly 2.5 times the rate of male dropouts; for females, the rates are slightly more than two to one. (See Table 15.) As a result, the advantage that females have in employment in managerial positions is reduced considerably with the completion of high school. Similar reductions in the advantage that females have over males in managerial and technical positions are observed for older participants in the labor force.

It is important to note that while, on average, managerial and professional positions are higher paying than positions in other occupational categories, females tend to be employed at a higher rate

TABLE 15

Percent of Year-Round Full-Time Wage and Salary Workers in Managerial and Professional Positions, March 1986

Population Group	16-to-24-Year Olds		25-to-44-Year-Olds		45-to-64-Year-Olds	
	Less Than Four Years High School	High School Education	Less Than Four Years High School	High School Education	Less Than Four Years High School	High School Education
Males	2.3%	5.7%	3.8%	9.0%	5.5%	16.4%
Females	4.5	9.5	6.2	14.2	5.5	13.9
White Males	1.8	5.7	4.1	9.8	6.3	17.1
White Females	3.4	9.2	7.2	15.2	6.9	15.0
Black Males	--[1]	5.7	1.2	3.4	2.2	10.3
Black Females	--[1]	7.8	2.3	9.2	1.1	6.9
Hispanic Males	0.0	6.4	3.0	8.5	3.0	11.0
Hispanic Females	--[1]	6.5	1.7	11.8	9.0	8.5
Total Population	2.9	7.4	4.6	11.2	5.5	15.3

1 The Bureau of Labor Statistics does not calculate ratios when there are fewer than 75,000 persons in the denominator.

Source: U.S. Department of Labor, Bureau of Labor Statistics, unpublished data, Table 18, "Earnings of Year-Round Full-Time Workers 16 Years Old and Over Who Were Wage and Salary Workers on Longest Job," March 1986.

than males in lower-paying positions in this larger category. In March 1986, 40 percent of the women in the professional and managerial category were employed as teachers below the college level, compared with only 15 percent of males.

The opposite pattern is observed for occupation in technical, sales and administrative support positions and for positions in precision production, crafts and repairs -- again, relatively high-paying occupations. Here, completion of high school increases the relative rate of employment of females over males in these fields. Among 16-to-24-year-olds, female dropouts were employed in these occupational categories at a rate that was only 32 percent higher than the rate for males; for high school graduates, the rate was 41 percent higher. (See Table 16.) Among the older population, high school completion is associated with an even larger difference in the employment rates of males and females in these fields. However, it should again be noted that females tend to be employed disproportionately in lower-paying administrative support positions than in higher-paying technical and sales jobs.[18] When only jobs in sales positions are considered, the pattern is similar to the one described above for administrative and technical positions. Completion of a high school diploma reduces or eliminates the relative advantage females have over males in these positions for all ages of the working population.[19]

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18 In March 1986, 72 percent of females employed in positions in the technical, sales and administrative group were in administrative support positions, compared to only 31 percent of males.

19 The proportion of dropouts and high school graduates employed as technicians is so low for both males and females that it is difficult to determine the relative impact of high school completion on male/female employment.

TABLE 16

Percent of Year-Round Full-Time Wage and Salary Workers in Technical and Precision Production Positions, March 1986

Population Group	16-to-24-Year Olds		25-to-44-Year-Olds		45-to-64-Year-Olds	
	Less Than Four Years High School	High School Education	Less Than Four Years High School	High School Education	Less Than Four Years High School	High School Education
Males	32.5%	46.1%	37.0%	50.3%	37.2%	52.1%
Females	42.8	64.9	29.8	60.9	25.3	62.9
White Males	33.1	47.4	39.1	52.2	39.5	53.4
White Females	41.4	66.1	30.4	62.9	28.6	65.2
Black Males	--[1]	31.6	25.8	36.4	27.6	37.7
Black Females	--[1]	53.9	28.8	49.6	16.5	46.4
Hispanic Males	25.9	44.7	30.0	45.6	28.6	47.0
Hispanic Females	--[1]	75.8	23.8	62.1	15.6	52.3
Total Population	35.4	54.3	34.8	54.7	33.3	56.9

1 The Bureau of Labor Statistics does not calculate ratios when there are fewer than than 75,000 persons in the denominator.

Source: U.S. Department of Labor, Bureau of Labor Statistics, unpublished data, Table 18, "Earnings of Year-Round Full-Time Workers 16 Years Old and Older Who Were Wage and Salary Workers on Longest Job," March 1986.

Looking finally at the lowest paying positions in service occupations and positions as operators, fabricators and laborers, we observe that completion of high school works more to the advantage of females than males. Among 16-to-24-year-olds, female dropouts were employed in these positions at about 91 percent of the rate of male dropouts; among graduates the rate was reduced to 56 percent. (See Table 17.) Similar reductions in both the absolute rate of employment of females in these positions and in the relative rate of employment of females to males in these positions is observed for the older working popoulation and for females from all racial and ethnic backgrounds.

In summary, **completion of high school is associated, for both males and females, with a shift in employment from the lowest paying positions (service, operators and laborers) to higher paying positions, mostly in technical, sales, administrative support and precision production fields. Males, however, tend to move more into higher paying technical and sales positions, while females move more into lower paying administrative support jobs.** Thus, while high school completion works to the advantage of both males and females in the types of employment opportunities available to them, on balance, males appear to benefit more than females in the types of jobs that a high school degree opens up to them.

Income

Dropouts tend, on average, to earn less money than high school graduates. In 1984, the median income for men and women 25 years and older who had not completed high school was about one-third lower than the median income of those who had graduated (Bureau of the Census, 1986). The Census Bureau estimates that over the course of a lifetime

TABLE 17

Percent of Year-Round Full-Time Wage and Salary Workers in Service and Operators Positions, March 1986

Population Group	16-to-24-Year-Olds		25-to-44-Year-Olds		45-to-64-Year-Olds	
	Less Than Four Years High School	High School Education	Less Than Four Years High School	High School Education	Less Than Four Years High School	High School Education
Males	58.3%	44.2%	55.0%	38.3%	54.0%	29.9%
Females	52.8	24.6	63.6	24.6	68.7	23.0
White Males	57.4	42.8	52.8	35.6	51.1	28.0
White Females	55.2	23.8	61.8	21.5	64.2	19.5
Black Males	--[1]	60.3	67.9	57.7	66.1	50.8
Black Females	--[1]	35.5	68.0	41.1	82.0	47.0
Hispanic Males	60.6	45.2	61.0	44.3	61.1	40.3
Hispanic Females	--[1]	17.7	72.3	25.5	74.6	38.5
Total Population	56.8	35.6	57.6	32.6	58.8	26.8

1 The Bureau of Labor Statistics does not calculate ratios when there are fewer than 75,000 persons in the denominator.

Source: U.S. Department of Labor, Bureau of Labor Statistics, unpublished data, Table 18, "Earnings of Year Round Full-Time Workers 16 Years Old and Over Who Were Wage and Salary Workers in Longest Job," March 1986.

(ages 18 to 65), the earnings of high school graduates are approximately $200,000 higher than the earnings of those who fail to complete high school (U.S. Bureau of the Census, 1983). For males, the differential in lifetime earnings between graduates and dropouts is estimated at $260,000, based on lifetime earnings of $861,000 for graduates and $601,000 for dropouts. For females, the differential is smaller: $170,000, based on lifetime earnings for graduates of $381,000 and earnings for dropouts of $211,000. A recent analysis by the Planning and Evaluation Service of the U.S. Department of Education places the earnings differential between dropouts and high school graduates even higher. It estimates the differential in lifetime earnings for males to be about $585,000 (lifetime earnings are estimated at $1.76 million for high school graduates and $1.18 million for dropouts) and for females to be about $300,000 (lifetime earnings are estimated at $679,000 for graduates and $380,000 for dropouts) (U.S. Department of Education, 1987). Although differences in methodology may be responsible for differences in estimates of the differential in lifetime earnings, both confirm that **both male and female graduates of high school earn more than high school dropouts.**

Recent data published by the Bureau of Labor Statistics on the median earnings of dropouts and graduates who were employed as year-round full-time wage and salary workers in March 1986 provide further evidence of the impact of high school completion on personal income. The data show that for young adults age 16 to 24, median earnings for males with four years of high school were about 20 percent higher than the median earnings of non-graduates; for females, median earnings were about 32 percent higher. Moreover, for males, the differential in median earnings

increases with age, rising to 36 percent for 25-to-44-year-olds and 38 percent for 45-to-64-year-olds. For females, however, the income differential increases for 25-to-44-year-olds, but then declines again for older workers.

While high school completion improves the earnings of both males and females, it appears to have a differential effect on relative earnings at different age levels and for different racial/ethnic groups. (See Table 18.) **For youth age 16 to 24, completion of four years of high school moves median earnings for females closer to the earnings level of males.** The ratio of female/male median earnings increases from 76 percent to 84 percent. **However, this improvement is observed only for whites.** For Hispanics, the ratio of female/male earnings is almost identical for dropouts and graduates, while for blacks, the female/male earnings ratio is lower for graduates (86 percent) than for high school dropouts (93 percent).

For older age groups in the civilian labor force, completion of a high school education has little effect on the relative earnings of males and females. For 25-to-44-year-olds, the female/male ratio of median earnings is about 66 percent for dropouts and about 67 percent for graduates; for adults age 45 to 64, the ratios are about 58 percent and 56 percent respectively. For blacks, the ratio of female/male earnings is slightly lower for graduates in both of the older age cohorts, while for Hispanics the reverse is true. These differences are, however, quite small and do not suggest a major effect of high school completion on the female/male earnings differential.

Completion of high school does, however, appear to be associated with a differential impact on median earnings for females and males of

TABLE 18

Median 1985 Earnings of Year-Round Full-Time Wage and Salary Workers Age 16-to-64

Population Group	16-to-24-Year Olds		25-to-44-Year-Olds		45-to-64-Year-Olds	
	Less Than Four Years High School	High School Education	Less Than Four Years High School	High School Education	Less Than Four Years High School	High School Education
Males	$10,572	$12,639	$16,100	$21,935	$19,529	$26,894
Females	8,083	10,664	10,585	14,711	11,374	15,189
White Males	10,838	12,893	16,643	22,836	20,399	27,426
White Females	8,109	10,748	10,832	14,991	11,503	15,322
Black Males	7,849	10,216	12,249	17,085	15,720	21,188
Black Females	7,287	8,810	9,750	13,329	11,187	13,731
Hispanic Males	9,189	11,777	13,527	17,673	16,771	21,649
Hispanic Females	8,147	10,462	9,689	14,619	9,427	12,703

Source: U.S. Department of Labor, Bureau of Labor Statistics, Office of Employment and Unemployment Statistics. Table 18, "Earnings of Year-Round Full-Time Workers 16 Years Old and Over Who Were Wage and Salary Workers on Longest Job, by Occupation of Longest Job and Years of School Completed."

different races. For females, the effect appears to be to increase the earnings gap between whites and minorities, particularly between whites and blacks. Among female youth age 16 to 24, the ratio of black/white median earnings was 90 percent for dropouts, but only 82 percent for high school graduates; among the older segments of the population, similar, but smaller differences were observed. For males, in contrast, completion of high school appears to decrease the earnings gap between whites and minorities, at least for the young worker. Among older workers the differences are small, although earnings of Hispanic graduates are slightly lower relative to white graduates compared with high school dropouts.

In assessing the relationship between high school completion and earnings, a number of points need to be kept in mind. First, as Pallas (1986) observes, income comparisons between dropouts and high school graduates may underestimate the cost of dropping out. High school graduates who attend college earn even more than high school graduates who obtain no further schooling, both annually and over their working careers. Comparisons between dropouts and high school graduates who do not pursue college do not reflect the sizable economic returns that many high school graduates derive by continuing their education through college.

Second, the differential in earnings between dropouts and high school graduates may be due to other characteristics that differentiate graduates from dropouts and which make graduates more valued by employers, e.g., ability, persistence, dependability (Pallas, 1986). McDill et al. (1986), in fact, estimate that only about one half of the difference in lifetime earnings between dropouts and graduates is due to dropping out; the other

half is due to differences in ability and other factors. However, regardless of the causes, over the course of their lifetimes, dropouts have lower earnings than high school graduates.

Societal Effects of Dropping Out

Although the most direct consequences of dropping out of high school are borne by the individual, research indicates that there are other costs attached to dropping out (Rumberger, 1986; Cipollone, 1986). Levin (1972), in an early study of the costs of dropping out, identified seven consequences of an inadequate education. These included: 1) foregone national income; 2) foregone tax revenues for the support of government services; 3) increased demand for social services; 4) increased crime; 5) reduced political participation; 6) reduced intergenerational mobility; and 7) poorer levels of health. Moreover, research has shown that high school dropouts are themselves likely to have children who drop out of school. Thus dropping out of school contributes further to the problem in later generations.

A number of studies have attempted to estimate the financial costs of dropping out to society. Levin estimated in 1972 that for dropouts age 25 to 34 in 1969 who failed to finish high school, foregone income amounted to $237 billion per year. The result of this was a cost to the nation of $71 billion in lost tax revenues, plus an additional $3 billion in crime prevention costs: in all, a total loss of $77 billion annually. A recent replication of this study by Catterall (1985) estimated foregone income for the class of 1981 to be about $228 billion in lifetime earnings and about $68 billion dollars in tax revenues to all levels of government.

While the financial costs of high school dropouts to individual states and school districts do not come near the costs to the nation as a whole, a recent state study indicates that these costs are not inconsequential. Using a cost-benefit model to estimate the utility of education and dropout prevention programs for the state of Texas, the Intercultural Development Research Association (IDRA) estimates lifetime earnings losses to dropouts of nearly $17 billion and lost tax revenues to the state of just over $5 billion (1986). Overall, IDRA estimates that the benefits of dropout prevention efforts based on the recovery of lost tax revenues and savings in welfare, job training, crime and unemployment costs ($17.5 billion) to be over nine times the cost of education and dropout prevention programs ($1.9 billion). Although caution is advised in accepting a benefit/cost ratio on this order of magnitude, the data provide additional evidence of the substantial costs to society of dropouts and the savings to society if dropouts were to complete a high school education.

Summary

Completion of a high school education has significant potential consequences for both the individual and society. For individuals, the consequences are both personal and economic; for society, the benefits are political and social, as well as economic. Research suggests, too, that completion of high school may have differential benefits for males and females -- both educationally and financially. We review here the major findings about the consequences of high school completion for all students, but pay particular attention to the differential effect on male and female students.

- Completion of a high school education is associated with higher rates of employment for all segments of the population. In March 1986, the employment rate for adult youths age 18 to 24 who had completed four years of high school was about 44 percent higher than the employment rate of dropouts; for adults age 25 to 44, the employment rate for graduates was 36 percent higher than the rate for dropouts; for 45-to-64-year-olds, it was 28 percent higher.

- **While employment rates for males are consistently higher than rates for females -- both for dropouts and high school graduates -- completion of high school reduces the gap in employment rates between males and females.** In March 1986, the employment rate of female dropouts age 18 to 24 was only 68 percent of the employment rate of male dropouts; for graduates, the female employment rate was 83 percent of the male rate. Among 25-to-44-year-olds, the employment rate of female dropouts was only 62 percent of the male rate, but the rate for female graduates was 76 percent of the male rate. For adults age 45 to 64, the female employment rate increased from 58 percent of the male rate for dropouts to 69 percent of the male rate for high school graduates.

- **Although white females have an employment rate that is closer to that of white males, completion of high school reduces the gap in employment rates between males and females more for minorities than whites.** For black females age 18 to 24, the employment rate for dropouts was only 45 percent of the rate of black males, while for high school graduates, it was 72 percent of the male rate. Similarly for Hispanics, the female rate of employment increased from 50 percent of the male rate for dropouts to 78 percent for graduates.

- **Completion of high school is associated with a shift in employment from the lowest-paying positions as operators, laborers and service workers to higher-paying positions, mostly in sales, precision production, technical fields and administrative support. Males, however, tend to move more into higher-paying technical and sales positions, while females move more into lower-paying administrative support positions.** Thus, while high school completion works to the advantage of both males and females in the types of employment available to them, males appear to benefit more than females in the types of jobs a high school diploma opens up to them.

- High school graduates earn more money than high school dropouts over the course of a lifetime. Estimates of the difference in lifetime earnings for males ranges from $260,000 to $585,000 and for females from $170,000 to about $300,000.

- **Although completion of high school improves the earnings of both males and females, it improves the earnings of females relative to males primarily for white females in the 16-to-24 age group.** For young minorities and for older age groups in the civilian labor force, completion of a high school education does not appear to reduce the earnings gap between males and females.

- High school dropouts produce a range of negative consequences for society. It was estimated in 1972 that high school dropouts cost the nation annually about $77 billion: $71 billion in lost tax revenues, $3 billion in welfare and unemployment costs and $3 billion in crime prevention costs. A more recent estimate suggests a loss of about $68 billion in tax revenues to all levels of government from the high school class of 1981.

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